

CASE 3678: Appli. of RYDER SCOTT  
for waterflood expan. waterflood  
buffer zone & unorthodox locations

CASE No.  
3678

Application,  
TRANSCRIPTS,  
SMALL Exhibits  
ETC.

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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
October 25, 1967

IN THE MATTER OF:

Application of Ryder Scott  
Management Company for a  
waterflood expansion, waterflood  
buffer zone and several unorthodox  
locations, Eddy County, New Mexico

Case No. 3678

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: The next case will be Case 3678.

MR. HATCH: Case 3678, Application of Ryder Scott Management Company for a waterflood expansion, waterflood buffer zone and several unorthodox locations, Eddy County, New Mexico.

MR. LOSEE: Jerry Losee. Mr. Examiner, A. J. Losee, Artesia, New Mexico, representing Ryder Scott Management Company. I have one witness, Mr. May.

(Witness sworn.)

D O N A L D T. M A Y, called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. LOSEE:

Q Will you state your name, please?

A Donald T. May.

MR. UTZ: M-a-y?

THE WITNESS: M-a-y, yes, sir.

Q (By Mr. Losee) Where do you live, Mr. May?

A Muleshoe, Texas.

Q What's your occupation?

A Petroleum Engineering.

Q By whom are you employed or --

A Ryder Scott Management Company.

Q How long have you been so employed?

A With the Ryder Scott Management Company?

Q Yes.

A Three years.

Q You have not previously testified before the Oil Commission?

A I have not.

Q Where did you obtain your education, higher education?

A Carnegie Institute of Technology, Pittsburgh, Pennsylvania.

Q Did you graduate with a degree, and if so, what degree?

A Bachelor of Science degree in Chemistry.

Q What year was that, Mr. May?

A 1953.

Q Since that time in what occupation have you been?

A I joined the American Sheet and Tinplate from Ryder Scott Petroleum Engineers in July of 1953 and have been engaged in Petroleum Engineering work since that time.

Q During that period of time, have you been engaged in any waterflood project, and if so, approximately how many?

A Over 600 projects from completion to the end. From the start to the end.

Q Have you written any papers on the subject of waterflood?

A Yes, I have.

Q Could you tell us a couple of the papers you have written and where they have been published and by whom?

A I recently, about three years ago, I wrote one for the short course at Texas Tech, a short course, they call it, I guess, and that was on the problems involved in deep waterfloods. This one was about 6400 feet and it's published in their pamphlet they put out for that meeting. Prior to that I was co-author on a number of papers with Harry M. Ryder in the late 30's and through the 1940's. One I published personally in 1948 was Chip-coring Technique with the introduction of Reservoir Control and water injection.

MR. LOSEE: Are Mr. May's qualifications acceptable, Mr. Examiner?

MR. UTZ: There may be some questions as to whether 6400 waterfloods would qualify him. He's qualified.

(Whereupon, Applicant's Exhibits 1 through 7 were marked for identification)

Q (By Mr. Losee) Mr. May, please refer to what has been marked as Exhibit 1 and explain what is shown on that map.

A The area involved in this project is outlined in

red, covering the Mershon Lease, the Humble-State and the Humble-State A, the Vandeventer Lease, the Rotary State Lease and the Collier State Lease. The areas outlined in orange and green are the waterfloods that were developed by Grayrich, now owned by Fina. The pattern area is also outlined in a dark green, which connects the proposed conversions and the new injectors to be drilled. There's an orange line coming from Adkin-Williams through the Vandeventer No. 1, through Humble-State 1, and through the Mershon No. 3 which are the wells shown in our cross section. I believe that explains everything by colors on this map.

Q Let me ask for a little further explanation on this Collier acreage which description-wise is the south half of the northwest and the northeast of the northwest. That is acreage that you have at this point entered into an agreement with Collier to purchase and propose to take over as operator?

A That is correct.

Q Now, I am correct in saying that actually at this point 31 - 32 sections of the working interest has agreed to sell their interest to you? Now, calling your attention to what is shown as your Mershon Lease and actually the Humble Lease being the southwest, northeast of Section 20, and the west half, northwest of Section 21, that is included

within the red boundary, that area was actually authorized as a waterflood project in June and July of 1962, was it not?

A Yes, sir.

Q And the terms of that order authorized buffer zone treatment to that acreage, did it not?

A That is correct.

Q Now, the Fina project to the southeast, circled in green, is operating and has operated at capacity allowables, has it not?

A That is correct.

Q Would you also point out the locations of your three unorthodox injector wells, just by quarter sections?

A All right. The Vandeventer No. 2 is in the northwest quarter of the northeast of Section 20 and the two Rotary wells are in the northwest corner of the southeast of Section 20.

Q Those are -- actually the locations are ten feet out of the 16 section lines, are they not?

A That is right.

MR. UTZ: All of them are ten feet out of the corner?

THE WITNESS: Yes, sir.

MR. LOSEE: Yes, sir, in the 40's.



Q (By Mr. Losee) Could you tell the Examiner some of the history of some of the production in this Fina flood, both as to cumulative and average daily production of some of the wells?

A Some of these wells, I might state, have produced as high as 100,000 barrels of waterflood oil. They range anywhere from 12 to the highest I have here, is 100,350 barrels of oil which is the cumulative through November, 1966, the last figures I worked with. In figuring the peak, or do you want me to speak of the peak production?

Q Surely.

A I don't have it on the individual wells, I have an average figure. Figuring from the rate of peak production for the whole area, it showed that these wells reached, on an **average**, pretty close to 75 barrels of oil per day per well. I do know that several of these wells produce considerably more than that at a peak and several of them produced somewhat less than that, which would mean some of them were over a hundred barrels a day at the peak and some of them would be somewhat less than fifty.

MR. UTZ: When you are speaking of the whole area, what area are you speaking of here?

THE WITNESS: The Fina Flood No. 2 outlined in

green on this exhibit.

MR. UTZ: The Fina No. 3 is not a capacity flood?

THE WITNESS: Excuse me?

MR. UTZ: Is the Fina No. 3 a capacity flood?

THE WITNESS: Yes; it was not developed on as confined an injection pattern, as you can tell by the key to the wells and for that reason it did not peak as well as the Fina Flood No. 2.

MR. UTZ: Go ahead.

(By Mr. Losee) Please refer to what has been marked as Exhibit 2, and explain what this compilation reflects.

A In Exhibit No. 2, we show the production by months by wells on all the wells involved in this project area. On Humble-State No. 1 you will note that its production has been on an average up to the current time from that period, almost two barrels of oil per day per well, a little more and a little less through that whole period, which certainly shows the depletion of primary. Humble-State 2-A has had some water-flood stimulation after mid 1965, it will be noted it was making less than a barrel of oil per day at that time, and kept increasing until the current time. It's 1200 to 1500 barrels of oil per month. On Mershon No. 1, we had stimulation

there from the injection of the Mershon No. 3 and the Fina injection to the southeast which was started somewhat prior to the recording of this production by months, and our Mershon No. 1 from water injection, we have recovered over 50,000 barrels of oil from it as waterflood oil.

Mershon No. 2 also had some stimulation from the injection of Mershon No. 3.

MR. NUTTER: Excuse me, Mr. May, this response would have been prior to the time when this table starts, is that correct?

THE WITNESS: Yes.

MR. NUTTER: Would it have been back around 1962 or '63?

THE WITNESS: '62 or '63, that's right, there was some stimulation at that time. I see we have our Pyle No. 1 listed here, but that is not included in this area. It offsets up there. Rotary No. 4 showed it to be making in '64 less than 2 barrels per month, and you will note that in, starting about the middle of 1965, it began to show the stimulation and has increased in the early part of 1966, and is currently showing some climb.

This stimulation is mainly from water injection. Some of it could be from our Mershon, some of it could be from

the water injection on the Adkin-Williams Lease, the Sima Capitan, but there's some channeling trouble which we feel has caused us some current decline in this No. 4 Rotary. The No. 5 has had some stimulation also and it's main stimulation came in mid 1966. Currently it has declined some as you will note. Rotary No. 6, through all this period, has maintained almost constant production until almost mid 9-1967, when it's showing a drop-off there, too. Vandeventer No. 1 is almost 3 barrels of oil per day per well. In early '66 -- excuse me, let me correct that. In early '64, ~~it was~~ about a barrel of oil per day which showed primary depletion and then it received stimulation in the latter part of 1964 and continued to the first half of 1965 and then showed a little decline. Again we have a pick-up in the latter part of 1966 to the early part of 1967, which was better controlled water injection along the two wells that Sima Capitan puts water into on the north line of the project, their 1-W and No. 7. Is there any further explanation on that?

Q No, I think that's fine.

A We also have the total production from the three Collier wells, Amerada State No. 1, Western-Yates No. 1 and Western-Yates No. 2. From the first eight months in 1967,

you can see the total production there was just a little over 200 barrels per day per each well. That's less, somewhat less than a barrel of oil per day on the average per well and certainly indicates primary depletion.

Q Mr. May, before you turn to the portion of this exhibit referring to cumulative, do you have an opinion in the proposed expansion as to whether those wells before response, have reached a primary state of depletion?

A Yes, they have.

Q Go ahead.

A On the next page, we'll notice that the cumulative production by wells is reported. This cumulative for all the wells shows the period up to 1-1-64, 1-1-'65, 1-1-'66 and 1-1-'67, and to the current time of 9-1-'67. We'll note most of these wells were drilled between 1957 and '58, except the Mershon which was drilled in about 1950. The cumulative primary, for instance, Humble-State No. 1 is only 7,662 barrels, through up to 1-1-'64. As you go down that same column, Mershon-State has 44,892, a big portion of this oil is secondary or waterflood oil, and the same with Mershon State No. 2. Of course, Mershon-State No. 3 shows very little because it was converted to injection. Rotary State No. 4, that same period is 19,027 barrels. The State No. 53, no --

Rotary-State 7, 7,836 and Vandeventer State No. 1, 9,000 barrels. Through all these wells it shows that the primary has been rather low and if we take it up to 1-1-'67, or, let's take it to the last column and go through the same wells, Humble-State No. 1 only has 10,003 barrels of primary oil produced. Humble-State A-2, you will notice on the current production we show some stimulation there; and Mershon State No. 1 is up to 68,060 barrels. The big portion of that, as I said a while ago, we had to produce over 50,000 barrels of secondary oil, leaving that well with over 80,000 barrels of primary.

Mershon-State No. 2, a fair portion of it is water-flood oil that we have recovered there also. Now, in all, this indicates that the primary from these wells has been in the order of 10,000 to oh, 12,000 to 15,000 barrels of oil.

Q Mr. May do you have an opinion as to the amount of oil that will be recovered in this project by secondary recovery methods?

A Yes, I do. I have worked with this Fina Flood No. 2 to help make estimates. Their Flood No. 2, the Northern end of it, produced 310 barrels of oil per acre foot. The southern portion produced 360 barrels of oil per acre foot. Their spacing goes from 10 to 17 acres, included in the five-spots. Of course, that is somewhat shorter spacing than

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we will be using. Our spacing will average 40 acres, a little better than that in the five-spot. The continuity of the Loco Hills Sand which is the upper zone is good on our area, as well as Fina Flood No. 2 which was the only zone they flooded and that was their rate of recovery. Due to our wider spacing, I figure we will take about two-thirds of the oil that they took per acre foot on account of the wider spacing, which I have allowed two hundred barrels of oil per acre foot that we have recovered by waterflood. In the area enclosed in our proposed pattern, we average four to six feet of waterflood pay in the Loco Hills, and recovering 200 barrels per acre foot means that we have about a thousand barrels per acre to be recovered by the 40 acres enclosed, which would be about 40,000 barrels per well from the Loco Hills Section only. The Me-Tex Premier and Lovington are somewhat tighter sands than the Loco Hills, and I have only given them half credit, as I have given to the Loco Hills, or about 100 barrels of oil per acre foot and the summation of the sands, Me-Tex Premier and Lovington, should give us about double the acre feet as we have from the Loco Hills alone, so those three zones should produce about the same amount of oil that we get from Loco Hills alone which is throwing us in the range of 80,000 barrels per well or better from each producing 40-acre

five-spot.

Q Please refer, Mr. May, to what has been marked as Exhibit 3, and without going into it, explain what is portrayed by that compilation.

A This is well data on every well in the project area. We show the Unit letter and section, the elevation of the wells, the date they were completed, the surface casing is recorded and the sacks with which it was cemented and also the production casing string, the size of the casing and its setting depth and the number of sacks used. The total depth of the well or the plugback total depth in the next column and under "treatment and remarks" we show how they were perforated and how they were fracked or acidized and some of them, whatever ones were completed openhole, they were shot with nitroglycerin and the zones in which they were shot.

Q Let me ask you, with respect to the Mershon-State No. 2, which is one of your proposed injectors: This data sheet shows no record of producing casing, Has later information caused you to revise that, and if so, do you know if there's any production casing set in the well?

A Yes, there is production string in that well. There's four and a half inch set at 2048, which is just at



the top of the Loco Hills section of sand.

Q Please refer to what has been marked as Exhibit 4, being your cross section.

A Yes.

Q And explain what is portrayed by the cross section, what wells?

A On Exhibit No. 1, I showed by an orange line how these wells were taken into the cross section going from the Sima Capitan or Adkins Well No. 1-W down through the Vandeventer No. 1 into the Humble-State No. 1 and into Mershon No. 3. This cross section shows the producing intervals only. There's no sale or structure consideration in laying out this cross section. It's just to show the relative thicknesses as you go from one well to well and which are the producing zones. As you go from left to right in this cross section, in the top of the heliotrope color, I've shown the pay of the Loco Hills zone and you can see it's rather consistent and we feel that this will work very well in view of Grayrich or Fina's experience in the zones they flooded on the Loco Hills.

Coming on down, you'll see the green, and it's labeled the Me-Tex zone. Through this area there are the main layers, there's some lessening, they will come and go, and that's the reason I discounted somewhat on the waterflood

recovery. In the red, I have posted what I call the upper Premier and then on down, I have posted the main Premier. Just which the main Premier comes above the top of the San Andres and lastly our, at the deepest point in the well, is the Lovington, indicated in yellow.

Q I think that's real fine. Refer to what has been marked as Exhibit 5, being the logs of the two proposed injectors that are presently drilled, being the producing intervals, at least.

MR. UTZ: Mr. Losee, I think we're going to be going here several more minutes. I think this would be a good time to recess for lunch unless you are in a big hurry to get home. We will recess until 1:30.

(Whereupon, a noon recess was taken.)

DIRECT EXAMINATION  
(Continued)

MR. UTZ: The hearing will come to order. I believe you were beginning with Exhibit No. what?

MR. LOSEE: Five.

MR. UTZ: No. 5.

BY MR. LOSEE:

Q Being the logs of the two injection wells that are already drilled that you propose to convert, would you explain

what that exhibit portrays?

A This is Gamma Ray neutron log, the first one is on the Western-Yates Collier State No. 1, and here it's just to merely relate the zones that we are going to flood, **Note** the top zone is the Loco Hills which is in the Grayburg section colored in orange, and then there's a Me-Tex colored in green and on down and red is the main Premier and lastly at the bottom in orange again, is the Lovington zone. We propose to set packer and tubing to inject into the inner space in the Loco Hills only and the other three zones will be exposed below the packer for water injection. The same is for the Mershon. The only difference in the Mershon Well No. 2, that the total depth is down to the top of the San Andres, only exposed in the Loco Hills, Me-Tex and Premier and they are exposed and open hole with the production string set right at the top of the Loco Hills.

Q They're not completed, it's not completed in the Lovington?

A No, it isn't.

Q Please refer to what has been marked Exhibit 6, being the diagramatic sketches of the proposed injection wells. Explain what is shown by those exhibits, or that exhibit.

A This is a diagramatic sketch of the wells to be

converted and also the proposed completion on those wells to be drilled. The first one is Collier-State No. 1 proposed for conversion. It currently has 8 - 5/8ths --

Q Mr. May, without going into each completion, let me ask you, I think the sketch is pretty self-explanatory, is it not?

A Yes.

Q The tops of the cement are not shown on those sketches, ~~Have~~ you calculated the top of the cement on the production string?

A Yes, I have.

Q Would you give us the figure for the Collier No. 1?

A On Collier No. 1, it has 5 - 1/2 inch casing set at 2298 and one hundred sacks at that well would bring the well back up to 1788 feet.

Q Would you give us the figure for the next well on the exhibit?

A The Vandeventer No. 2 has 4 - 1/2 inch casing set at 2246 feet cemented with 100 sacks and calculated to come back to 1996 feet. The Rotary No. 8 proposed new intake, has 4 - 1/2 inch casing set at 2446, cemented with 100 sacks, brings the top of the cement at 1996 feet. The Rotary No. 7 has 4 - 1/2 inch casing set at 2460, cemented with 100 sacks,

top of the cement would be at 2010 feet. Mershon No. 2, proposed conversion has casing 4 - 1/2 set at 2048 feet cemented with 100 sacks would bring the top of the cement at 1598 feet.

Q Mr. May, all of those wells you propose to inject part down the tubing with a packer and part down the annulus with the exception of the Mershon State No. 2?

A That is correct.

Q The Mershon State No. 2 not being open to the Lovington Sand?

A That's right.

Q Will you explain how you -- beyond what my leading question was -- how you are going to selectively inject into those four different zones?

A The tubing will be plastic-lined set on a packer about midway between the base of the Loco Hills zone and the top of the Me-Tex zone. Through the annular space, we will inject water into the Loco Hills zone which we will control at about 200 barrels of water a day. The other three zones, the Me-Tex, Premier and Lovington will be exposed below the packer, water will be injected through the tubing and each of these zones will receive the water simultaneously. We hope they'll all take about the same rate, but we wouldn't know that unless we took some injectivity test.

MR. NUTTER: What would the total amount injected into those zones be?

THE WITNESS: About 200 into the Loco Hills and about 600 barrels of water a day in the other three zones.

MR. NUTTER: 600 down the tubing and 200 down the annulus?

THE WITNESS: Right.

Q (By Mr. Losee) Do you propose after January 1st, to re-inject your produced water and if so, in what manner will you handle it?

A Yes, we will re-inject the produced water. We will set up at our plant an extra tank so it will receive the produced water and run a dual header into our plant or to the pressure pumps and, for instance, we're injecting fresh water then we get a tank full of salt water, we'll just have the fresh water going in, shut it off while it's receiving and have the salt water turned on, we'll alternately inject and not mix the water.

Q Is your system closed?

A It is closed, yes, with gas seals.

Q What is your source of fresh water, Mr. May?

A Currently the two north wells we're getting water from the Sima Capitan and at the Merston No. 3, Fina is

injecting water there. In a short time, we are currently building a water line from the Caprock serving several other fluids through the field, coming from the Caprock through the Nichols Artesia and as soon as we have that line installed, we will build our own pressure plant and inject the water with our own plant in this pool, altogether.

Q At what pressure do you propose to inject the water?

A We expect to get up to 2700 pounds at that high, particularly in the lower three zones; we hope we don't have to go that high in the Loco Hills from the experience Fina has had down there.

Q Why do you expect to go that high in the other three zones?

A The sand is less tight, quite a bit less permeable. We have core data that was turned over to us from the Fina wells.

Q If requested by the Commission and prior to injection, would you be willing to test your casing to 3,000 pounds?

A Yes, we would, certainly would.

Q How would you know if a leak developed in the casing under this type of injection system?

A We keep a daily record of the intake rate and pressures at the wellhead at every intake. If we develop a casing leak we would notice for one, say the well was taking 200 barrels of water a day through the casing, all of a sudden it would begin to increase at the same pressure. We would know we would have a casing leak and vice versa, if we started to control that rate of 200 we would find our pressure dropping off, so it will check out either way. We would immediately get on that and take care of that leak, that's the way we operate.

Q What would you do to remedy the leak?

A We would set a retainer in order to protect cement going into the exposed zones and set a packer and tubing above the leak point and squeeze it off.

Q Let me hand you what has been marked Exhibit 7, being Xerox copies of the letters from the working interest and overriding royalty interest and production payment interest owners within this expanded area, in which they all consent to a buffer zone treatment and/or transfer of allowables with the exception of Humble, which consents to the buffer zone treatment and is silent on the transfer of allowables. Is that in general, a summary of the letters?

A That is correct.

Q Now, are the originals in the file of Ryder Scott?



A They are. They are in our Wichita Falls file.

Q Mr. May, do you have an opinion as to whether the expansion of this existing flood with either buffer zone treatment or transfer of allowables and also the approval of these three unorthodox injection well locations will prevent waste and be in the interest of conservation?

A It sure will.

Q Were Exhibits 1 through 6 prepared by you or under your direction?

A That is correct.

Q And Exhibits 7 are actually letters, the originals of which are in your files?

A That is right.

MR. LOSEE: At this time, Mr. Examiner, I would offer Exhibits 1 through 7.

MR. UTZ: Without objection Exhibits 1 through 7 will be entered into the record of this case.

(Whereupon Applicant's Exhibits 1 through 7 were admitted in evidence.)

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. May, your Exhibit No. 1 shows your project area, I interpret this to say that the area outlined in red

is the project area?

A That is correct.

MR. LOSEE: Let me offer one bit of explanation. That would be the entire area. The existing project is encompassed within that red outline too, being the west half of the northwest of 21 and the southeast northeast of 20. That's already under order of the Commission with buffer zone treatment.

MR. UTZ: I see.

Q (By Mr. Utz) Still, well, the east half of the southeast quarter and -- southeast of the northeast of Section 20 and the northeast northeast of Section 20, and the northeast northeast of Section 29, what is the explanation for that area, is that a neither area?

A Excuse me?

Q Is that in neither area? It's neither in Fina No. 2 or your area?

A A new area.

Q Neither area, that's a no man's land, is it?

A No, that's operated by Fina.

Q Both operated by Fina?

A No, this Kersey down here --

MR. LOSEE: Witness pointing to the northeast

northeast of 29, Kersey.

A Yes, Fina has the well, 322 is a relatively recent well, a new well.

Q Would that be in their project area at this time?

A Yes, as far as I understand, it is.

Q Now, you are asking for three non-standard locations, ten feet out of the corners of the respective quarter quarter sections. What is your reason for requesting those non-standard locations?

A It's so that we can protect the correlative rights of each lease. There's not an exchange of oil that's holding within these properties itself, it's so near the joint line of the leases.

Q It has to do with protection of correlative rights rather than sweep efficiency?

A Also sweep efficiency comes into it in order to set up five-spot pattern approximately 40 acres in size. We feel we wouldn't want to go beyond 40 acres, much more that in order to get the recoverable oils we estimate that we can get here.

Q Is the Mershon No. 3 being injected into at this time?

A Yes, it is.

Q You are doing that?

A Fina is furnishing the water for that. There was an agreement with Fina as an exchange well for their 13, 17 and 11, down their Wellsley.

Q That is the only well in the outlined project area on Exhibit 1 that is being injected into at this time?

A Cima Capitan is also injecting water in the 1W and No. 7 on Adkins-Williams Lease. We are paying for that water being injected into those wells.

Q That's outside your area just over the line?

A It's outside of our first area, but it is affecting the proposed area, the part outlined in red, now.

Q You asked for two allowable alternatives here, one is a buffer zone which would in effect be allowing you capacity allowables, is that correct?

A Yes.

Q The other one is a transfer of allowables as between leases within your proposed project area here. Is that the other alternative?

A Yes.

Q On your diagrammatic sketches, Exhibit No. 6, for your Collier No. 1, if my calculations are correct, the cement is 181 feet above the top perforations in the Loco

Hills zone. Is it your opinion that that is enough cement above the Loco Hills zones to withstand the pressures that you intend to use?

A Yes, sir.

Q Which you stated would be something less than 2700 pounds at the surface, you hoped?

A Yes, sir.

Q From the bottom of the 8 - 5/8ths at 543 to 1787 which is -- incidentally, is that a calculated top of the cement?

A That is the calculated top, yes, sir.

Q What do you have in there that might be of any value, any water, oil, gas?

A To the top of the cement down?

Q Yes, between the bottom of the 8 - 5/8ths to the top of the cement, you have open hole behind it?

A It's barren of any oil or gas.

Q Or any water?

A No water; all the water is shut off at the 8 - 5/8ths.

Q Is this fresh water you are going to inject here or salt water?

A Fresh water.

Q How old -- what size casing is your production

string?

A You'll note it right at the very bottom of the figure, five and a half inch casing to 2298 at Collier No. 1.

Q How old is the five and a half inch string in this well?

A At the time the well was --

Q Is it quite old or comparatively new?

A The well was drilled in 1961.

Q So it's pretty new casing?

A Rather new.

Q For wells still in their area, anyway?

A Yes.

Q You don't anticipate any problem then, even though you're injecting down the annulus?

A No, we don't.

Q As far as the casing string is concerned, you will test the casing if we so desire?

A If you request.

Q How much cement have you got above the Loco Hills top perforation in your Vandeventer No. 2? Are you sure about the top of your cement in that well, was that 1996?

A 1996, yes, that's where I calculated it.

Q The top of the Loco Hills zone is 1987, that's

pretty close, isn't it, nine feet of cement over the top?

A May I check this just a moment?

MR. UTZ: Surely.

A That's what it calculates to be 1996, does make it nine feet.

Q That being true, you would be injecting into open hole behind the casing, would you not?

A I've experienced where only two feet of sand, or cement would hold pressures that high above it.

MR. NUTTER: May May, the top of your cement is only one foot above the bottom of your proposed perforations.

MR. LOSEE: Let me ask a question here. This is one of the proposed unorthodox location wells, is it not, and actually if that's the point at which the cement would bring up, you could actually add another 50 sacks or so to bring it up?

THE WITNESS: We certainly would add more cement. I thought we were working with one of the proposed conversions when we were looking at that.

Q (By Mr. Utz) You haven't drilled these wells yet?

A No, We will add plenty of cement up there.

Q Let me ask how much cement you propose to bring up over the top of Loco Hills?

A It will almost be double that, 150 sacks.

Q One hundred feet of cement or one hundred fifty feet?

Q Yes, we will have another 100 feet of cement in there.

Q In these areas that are in this area, I suppose the open hole you propose to leave behind the casing will be non-productive and tight zones?

A Right.

Q With no fresh water, oil or gas?

A No, there isn't.

Q And the same problem, I believe, exists on your Rotary No. 7?

A That is right, it's the same situation there.

Q So you have a minimum of 100 feet above the Loco Hills there, too?

A Right.

Q On your Mershon No. 2 which I believe is already drilled, is it not?

A That is drilled, yes, sir, for proposed conversion.

Q You don't propose to selectively inject there?

A No, we don't. We'll have all those zones exposed at the same time. The Loco Hills there was shot with nitro-



glycerine and if we would try to squeeze that and go in and reperforate we're afraid we will get it exposed again. We will be exposed to locating into the Me-Tex Loco Hills and Premier at the same time. We can't isolate either one, any one.

MR. UTZ: Are there any other questions.

MR. NUTTER: Yes, sir.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. May, in making these calculations of your cement tops, what did you assume, one hundred percent fillup, or do you have a safety factor in there?

A We assumed one hundred percent fillup, yes, sir.

Q According to the log, Exhibit No. 5, I believe it is, it looks like you have a pretty well washed out section through the Loco Hills. That would take quite a little bit of cement wouldn't it? The caliper log there.

A That's in the, excuse me, which well are you referring to?

Q I don't know. I have Exhibit 5, Mereson No. 2.

A The production string is set just above that. That's open hole.

Q That's the open hole?

A Yes.

Q So you are not washed out too badly above there apparently?

A No, we are not washed out above there. The washout has no bearing here as far as cementing the production string is concerned since it's set just at the top of the Loco Hills.

Q In this particular well, you won't have any selective injection, it will all go down the casing, or will you run tubing?

A We may run tubing. We'll likely start off with casing, if we are not satisfied, we will run coated tubing right away and set it in the four and a half and inject through the Loco Hills, into the Loco Hills Me-Tex and Premier, through the tubing and packer.

Q You still wouldn't try to set a formation packer?

A No, sir.

Q And attempt any selective injection?

A It would be awfully hard to work, we feel.

Q I presume, then, if you do get into difficulties as far as flooding the Loco Hills, as well as these other three zones, I believe you stated the Loco Hills is more permeable than the others?

A Yes.

Q In the event you have trouble getting water into

the three zones, I presume you could run a small diameter liner in there and attempt to selectively perforate, to effect stimulation?

A Yes, sir.

Q I notice on Exhibit No. 1 this map here, that you've included in your proposed project area acreage that extends clear down here into Section 29. I don't see that this is being flooded or that it's affected by the flood in any manner. Why did you include all this acreage in the west half of the southeast of 20 and the northwest, northeast of 29?

A It hasn't been; of course, Fina is injecting over there in Section 28. You see, along the west boundary of the area outlined in green the injector No. 15 and 13 reading from the north to the south, in time, we expect stimulation from that and four proposed intakes to the north labeled Rotary-State No. 7 and 8, it will start driving toward the south and if everything is very good, well, we hope to extend the pattern on the Rotary Lease to cover that area.

Q The project area could be extended as additional injection wells are put on?

A Yes.

Q You are aware that Rule 701 defines a project

area as being the 40 acre tracts upon which the injection wells are located, plus the direct and diagonal offsets to those 40's?

A Yes.

Q Granted the 40 acres where the Well No. 5 is would be in the project area because it's actually going to have two injection wells on it?

A Yes.

Q The directly offsetting acreage to the south would be in the project area if it had a well on it, but it doesn't apparently?

A No.

Q Of course, this acreage down here in Section 29 has intervening acreage between it and the waterflood which isn't developed?

A Right.

Q Sima-Capitan is operating this flood up directly north of you in Section 17. Is that flood also a capacity type waterflood project?

A No, it isn't.

Q Now, if we declare the Collier Lease, for example, to be a buffer zone with a capacity allowable, that's actually separated from the nearest injection well in the

waterflood project, the capacity waterflood project to the east by more than a mile, is it not, Mr. May?

A Of course 1 W, on the Sima Capitan, see, we're paying them to put water into 1W and ET No. 7 on Adkin Williams, that's connected by the heavy green line and, of course, that's the nearest injection to the Collier.

Q But you said it wasn't a capacity type flood up here?

A I don't think they ever got a capacity type.

Q So we have a capacity flood over here?

A Yes.

Q The purpose of the buffer zone is to permit acreage that offset a capacity type flood to have equalized injection and producing rates. Then if we consider the green area to be a capacity type flood, we are talking about the Collier Lease on the west side of Section 20, we're getting into acreage that's more than a mile away from the capacity type flood?

A That is correct. Of course, as far as defining it, a capacity type flood on the Adkins-Williams.

Q That's what I asked you, if it was, I thought you said it wasn't.

A Excuse me.

Q Now, the Commission, in approving this original Order, I believe that was for Waterflood Associates, wasn't it?

A That is correct.

Q Designated the west half of the northwest of 21.--

A Right.

Q -- and the southeast northeast of 20?

A That is correct.

Q As capacity acreage?

A Yes, sir.

Q Which comprises 40 acre tracts direct or diagonally offsetting the Fina Flood?

A Yes.

Q Mr. May, in the event this acreage were unitized or otherwise consolidated by some sort of an agreement among the royalty and overriding royalty owners, it would be permissible to transfer allowables from one tract to another. I presume that that's the problem here. You have not consolidated this acreage?

A It has not been.

Q Working interest is all common as soon as you buy this?

A Right.

Q But then you have got overriding and royalty interests that are not consolidated?

A That's right.

Q Is it possible to consolidate those?

A If there could be, the time factor is the big thing, I think, to unitize the area, We were very sorry it wasn't unitized originally by Waterflood Associates and to get it unitized now would be a terrific amount of time.

Q It might not take a full unitization, some sort of an operating agreement or understanding executed by these working interest owners.

MR. NUTTER: Mr. Losee, do you have any thoughts on that subject?

MR. LOSEE: The letters which they have actually filed with the Commission, or copies thereof actually is the consent in effect among the parties to a transfer of allowables. All of these lands entirely within this project are State lands with one common beneficiary, the University of New Mexico. Their problem is actually solved by transfer of allowable. The difficulty arises with respect to across the top tier, there are three separate 40 acre leases and there's not enough relief in the existing Rules, if you consider that some wells and actually as I understand it,

their response in 2 A has already been in the 55 barrel area. It happens to have no injection wells on it, so it's going to get chopped into a 42 barrel allowable. If the Commission would, in their power, permit the transfer of allowables, none of these wells then are going to go, under normal conditions are going to get over a hundred barrels a day; but if you start looking at 42 for those lone 40's, they're not in a situation, they're going to get washed by, I suppose.

MR. NUTTER: I just jotted down, these are the figures you made reference to before the hearing. The Humble is a 40-acre with no injection well, 2-A so it would get a 42 barrel allowable. The same would apply to Humble A lease. Every other lease has an injection well, as well as a producing well on it.

MR. LOSEE: Actually the three, the 2-A which is a Humble, and, of course, this other Humble is still in the buffer zone provisions, this then, but looking across here, this Humble A is a lone 40 --

MR. NUTTER: right.

MR. LOSEE: The Vandeventer is a lone 40 with an injection well.

MR. NUTTER: It has an injection well, so it earns 84 barrels a day, no 42 plus 14 --



MR. LOSEE: 56.

MR. NUTTER: 56 barrels.

MR. LOSEE: And it's already, this well, at least, has already been crowding 55 barrels.

MR. NUTTER: Our highest month of production was 1542 barrels in July of '67, which would be in excess of 50.

MR. LOSEE: This Collier, I don't know whether it's clearly noted on here, but this northeast of the northwest is the Amerada State Collier. Do you have it distinguished? It's a separate lease from the south half.

MR. NUTTER: Oh, I see, the other 80 is the Western-Yates.

MR. LOSEE: Yes.

MR. NUTTER: This is the Amerada State?

MR. LOSEE: Yes, it's really those lone three 40's up there that created the problem. The rest of them, either the transfer of allowables within the lease or the actual allowable under it is going to take care of the situation.

MR. NUTTER: Mr. Losee, may I ask you this question? In the event you have small 40-acre tracts which are not unitized and you have a problem as to production, and your treatment is buffer zones to take care of this production problem aren't you defeating the purpose of the intent of the buffer zone rule?

MR. LOSEE: Well, of course, in part, yes. I wish I had declined to answer your question.

MR. NUTTER: You are not under oath.

MR. LOSEE: I realize that. But the offsetting 40's to the buffer zone are, with actually the Humble A, for instance, is without a great amount of control. It's pushed directly from the north by Sima-Capitan.

Q (By Mr. Nutter) What are the rates of injection in these wells up here to the north, Mr. May?

A Pretty close to 400 barrels of water a day.

Q On both wells?

A Yes, both of them are pretty close to that. It's 300 to 400, in there. I don't have my injection data with me.

Q Do they have all four of these zones open?

A It has the Loco Hills open, I'm sure, and they're giving us some trouble in that zone. There's the Me-Tex and Premier, I'm not sure about the Lovington.

Q It does have the Loco Hills and at least two of the lower three zones in each well?

A Yes.

Q So actually the injection rates up here are not as high as what you contemplated down here, are they?

A Not quite, no, sir. After we get our plan in and get those wells under control, if we can by some, injecting some selective compound, we hope to get those in balance and with our wells, as far as injection rates are concerned, we think we can, when we get the control of the water injection.

Q What about the Fina Flood? It has peaked out, has it not?

A Yes, it has gone over its peak.

Q Have they cut down on the injection rates in there, or are they still injecting?

A They're still maintaining pretty close top. Some of the wells, that's rather close spacing, some of the wells they have retarded the injection on because of their close spacing and just go in every other well.

Q Do you know what their average water cut is in their flood now?

A Not for sure. I think pretty close to, it's gone over the 50-50 mark, that's all I can say.

Q So it's definitely gone over the hump?

A Yes.

MR. NUTTER: Well, now, Mr. Losee, you said in fact these letters were in effect consents to transfer of allowable.

MR. LOSEE: Yes, with the exception of Humble's letter which doesn't actually answer the question pro or con.

MR. NUTTER: Waterflood Associates, what is their interest in this, are they --

MR. LOSEE: They are actually the owner of the lease and Ryder Scott is operating it.

MR. NUTTER: Is the Management Company operating it?

MR. LOSEE: Yes.

MR. NUTTER: So they agreed to it, the owner agrees to it?

MR. LOSEE: Yes.

MR. MOFFETT: N. W. Staples, on the next letter he signed for Waterflood Associates and he also signed for himself as the original --

MR. LOSEE: I am going to let Mr. Moffett answer this, he's the President of Waterflood Associates and also has an individual interest.

MR. NUTTER: We have a telegram here from Sigfreid, Incorporated. What is their interest?

MR. MOFFETT: Production payment.

MR. NUTTER: Production payment overriding?

MR. MOFFETT: Yes.

MR. NUTTER: In what acreage, all of the acreage?

MR. MOFFETT: All of the acreage.

MR. NUTTER: How about Christianson, the same thing, Mr. Moffett?

MR. MOFFETT: Yes.

MR. NUTTER: Wilkerson?

MR. MOFFETT: That's a production payment on a selective part of the acreage and that part I can't tell you. It's not over the total acreage.

MR. NUTTER: You know, Mr. Losee, the letter states that "we have set up a hearing with the New Mexico Oil Conservation Commission for July 26th, 1967, to ask for a buffer zone allocation or, in other words, unlimited allowables and the ability to transfer allowables." Well, if you have unlimited allowables, there's no necessity for transferring allowables.

MR. LOSEE: Very true.

MR. NUTTER: So in effect, I think if these parties had consented to transfer of allowables it would have read, "to ask for buffer zone allocation or, in other words, unlimited allowables or the ability to transfer allowables"; if they had consented to transfer of allowables, it would have been "or the ability to transfer allowables."

MR. LOSEE: Well, Mr. Nutter, I didn't draft the letter, and I might have used that language, too. I think

the reading of the, "and the transfer of allowables," It's not. I would have preferred to use, "or".

MR. NUTTER: Could we get consent from these companies to the transfer of allowables?

MR. MOFFETT: I think we could.

MR. NUTTER: And these owners?

MR. MOFFETT: It would take a matter of time. If you recall, Mr. Nutter, I talked to you on the telephone about this thing. This was your suggestion, this letter.

MR. NUTTER: That we get some agreement to transfer of allowables.

MR. MOFFETT: Yes, or buffer zone, either one, because you and I had talked on the telephone about this thing.

MR. NUTTER: I didn't know you were talking a mile away when you were talking buffer zone. You had a problem with one 40 here.

MR. MOFFETT: Right, and at that time, we didn't think, I believe it was you that came back and told me that we did not have trouble with the other 40 and then we got to looking at the thing and the Artesia Office called me and said it was not included, so we took the thing as a whole and went over it. We tried to cover every aspect in the letter.

I think, yes, that we could get these people all to agree. I don't think we would have any trouble at all. The time factor would be a problem, some of them are in Hiwail, one of them is in Viet Nam; no telling where Mr. Sigfreid is, he might be hunting bears in Alaska.

MR. NUTTER: What about Mr. Mayfield, who sent the telegram for him?

MR. MOFFETT: It's possible that he could. We finally got him to contact Mr. Sigfreid and get his approval and then send the telegram so that we would have 100% of all the interest owners with the exception of the State, approve that letter, but the time factor here is it. Yes, I am sure we could, the people would agree to it.

MR. NUTTER: I direct this question to Mr. May.

Q (By Mr. Nutter) Mr. May in the event we had complete flexibility of transferring allowables around here in this project area and if the project area were defined as set forth in Rule 701, we would have a minimum allowable that could be produced from the wells in the area of 476 barrels per day. Do you think that that's sufficient allowable to operate the project?

A For this entire project here, considering all the producers?

Q With the existing producing wells and the proposed injection wells and --

A Yes, sir.

Q -- and we would draw the line project area right across here. This 40 has injection wells on it, if there were a well down here, it could earn credit too.

MR. MOFFETT: You would take this in when we developed it.

Q (By Mr. Nutter) Oh, yes, the project area would be expanded as the additional wells were put on production.

A 476 barrels per day?

Q 476 barrels per day.

A It could pretty well be taken care of.

Q Well, actually --

A Six producers getting pretty close to 80 barrels per day per well. I think it would be all right.

Q Maybe I had better correct that, because we have a buffer zone. You would lose some credit for that but the buffer zone would be operated at capacity. We have three-fourths and one extra well that is 140 barrels off the 476, so actually what it would be, would be 336 barrels for this acreage.

A 336.



Q You'd have two capacity wells, being the Humble No. 1 and the Mershon No. 1?

A Yes, let me ask this question. Our Rotary No. 7 and No. 8, is your figuring including credit for those two injectors on the Rotary Lease?

Q Yes, it is.

A O. K. Yes, that 336 barrels would come very close to taking care of us.

MR. NUTTER: Mr. Losee in the event that the Commission should enter an Order on a temporary basis to permit the wells to be operated in the buffer zone for temporary period of time, an effort could be made to get the consent of these parties to the transfer of allowables, could it not?

MR. LOSEE: Yes. I feel like that if the order were entered that way it would allow us oh, I suppose 60 or 90 days to get them.

MR. NUTTER: Mr. Moffett, would 90 days be sufficient?

MR. MOFFETT: Ninety days would be fine.

Q (By Mr. Nutter) And you do eventually, if this is successful here, and the flood around your No. 5 Rotary you plan to put some wells south of the 5?

A Yes, sir, jointly with T P Oil Company on the

west and Fina to the east.

MR. NUTTER: I think that's all I have, Mr. May.  
Mr. Losee and Mr. Moffett, thank you.

RECROSS EXAMINATION

BY MR. UTZ:

Q Is the Fina No. 323, which is in the northeast of the southeast, producing?

A Yes, sir.

Q Has that received response?

A I don't have the monthly figures to determine that. I understand it's making about 40 barrels a day. I believe it's made that, it's a recent well, I believe it started off about that and it's maintained that.

Q Couldn't that be considered a part of the buffer zone, if that 322, a part of the Fina Flood No. 2 project area?

MR. NUTTER: I don't know how that would be considered, Mr. Utz, I don't know if that's a legitimate expansion of an existing flood or not.

MR. UTZ: If it was, then the buffer zone could be expanded by two 40's, am I correct?

MR. NUTTER: Rule 701 provides that capacity allowables would be granted to waterfloods approved prior to

1959 and to legitimate expansions of the floods. This might be an illegitimate expansion, I don't know. There is no injection out here on this lease, evidently.

MR. LOSEE: Actually, I don't think the rule defines the end of the buffer zone.

MR. NUTTER: It doesn't?

MR. LOSEE: I recognize what the intent was, but it just authorizes the Commission to grant buffer zones.

MR. NUTTER: I think most buffer zones have been held two locations deep at the most, Mr. Losee.

MR. LOSEE: Well, our recognized practice has --

MR. UTZ: Are there any other questions of sworn or unsworn witnesses?

MR. LOSEE: I have one, two letters with respect to the unorthodox, addressed to Ryder Scott. I think you probably have a telegram.

MR. NUTTER: Did you receive these in the normal course of business?

THE WITNESS: Yes.

MR. LOSEE: Why don't I offer these as Exhibit 8?

(Whereupon, Applicant's Exhibit 8 was marked for identification.)

MR. LOSEE: And I ask to withdraw them, if I may, after they have served their purpose, being the consent of

American Petroleum, Fina and Texas Pacific to the unorthodox location.

MR. UTZ: Do you want copies of them?

MR. LOSEE: We would like the original because it's an agreement to share the cost. I will make copies if I may, and leave them with the Commission.

MR. UTZ: We'll be happy to make copies and give you the originals. Are there any other questions?

MR. HATCH: We don't have the telegram.

MR. UTZ: The witness may be excused.

(Witness excused.)

MR. UTZ: Any statements? The case will be taken under advisement.

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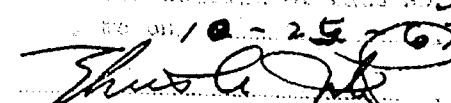
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STATE OF NEW MEXICO )  
 ) ss  
 COUNTY OF BERNALILLO )

I, ADA DEARNLEY, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my hand this 28th day of November, 1967.

  
 Court Reporter

I hereby certify that the foregoing is  
 a true and correct record of the proceedings in  
 the hearing of Case No. 367.8,  
 on 10-25-67.  
  
 New Mexico Oil Conservation Commission

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 3678  
Order No. R-3341

APPLICATION OF RYDER SCOTT MANAGEMENT  
COMPANY FOR A WATERFLOOD EXPANSION,  
WATERFLOOD BUFFER ZONE, AND SEVERAL  
UNORTHODOX LOCATIONS, EDDY COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 25, 1967,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 9th day of November, 1967, the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

(1) That due public notice having been given as required by  
law, the Commission has jurisdiction of this cause and the subject  
matter thereof.

(2) That the applicant, Ryder Scott Management Company, is  
the operator of the Artesia-Nichols Waterflood Project, a water-  
flood buffer zone with capacity allowables comprising the SE/4  
NE/4 of Section 20 and the W/2 NW/4 of Section 21, all in Town-  
ship 18 South, Range 28 East, NMPM, Artesia Pool, Eddy County,  
New Mexico, authorized by Order No. R-2272 and Order No. R-2272-A.

(3) That the applicant seeks permission to expand the afore-  
said waterflood project by the conversion to water injection of  
its Western-Yates Collier State Well No. 1 located in Unit F of  
said Section 20, its Marshon State Well No. 2 located in Unit D  
of said Section 21, and three additional water injection wells

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CASE No. 3678

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to be drilled at the following unorthodox locations in said Section 20: Rotary Well No. 7 to be located 2650 feet from the North line and 2650 feet from the West line; Rotary Well No. 8 to be located 2650 feet from the North line and 1330 feet from the East line; and Vendeventer Well No. 2 to be located 1310 feet from the North line and 1330 feet from the East line.

(4) That the applicant further seeks the designation of the entire area comprising the W/2 NW/4 of Section 21, the SW/4 NW/4, E/2 NW/4, NE/4, and W/2 SE/4 of Section 20, and the NW/4 NE/4 of Section 29 as a waterflood buffer zone with capacity allowables, or as an area wherein transfer of allowables between leases would be permitted.

(5) That the wells in the project area as proposed are in an advanced state of depletion and should properly be classified as "stripper" wells.

(6) That the SW/4 SE/4 of Section 20 and the NW/4 NE/4 of Section 29 are not eligible for tract participation and should not be included in the waterflood project area at this time.

(7) That the area comprising the SE/4 NE/4 of said Section 20 and the W/2 NW/4 of said Section 21 is presently established as a waterflood buffer zone wherein wells may be produced at maximum capacity and should continue to be so designated.

(8) That in order to afford the applicant an opportunity to produce its just and equitable share of the oil in the subject pool, and to otherwise prevent waste and protect correlative rights, the applicant should be authorized to expand the aforementioned waterflood project by the injection of water through the five additional wells as set forth in Finding No. (3); that the SE/4 NE/4 of said Section 20 and the W/2 NW/4 of said Section 21 should continue to be designated a waterflood buffer zone wherein wells may be produced at maximum capacity; that the SW/4 NW/4, E/2 NW/4, W/2 NE/4, NE/4 NE/4, and the NW/4 SE/4 of said Section 20 should be designated a waterflood buffer zone wherein wells may be produced at maximum capacity for a temporary period of 90 days; that upon expiration of the aforesaid temporary period the SW/4 NW/4, E/2 NW/4, W/2 NE/4, NE/4 NE/4, and the NW/4 SE/4 of said Section 20 should be designated as an area wherein transfer of allowables between leases is permitted, provided by that date said area has been unitized or otherwise consolidated, or provided all persons owning working interests and/or royalty interests within said area have so agreed and evidence of such unitization,



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CASE No. 3678  
Order No. R-3341

consolidation, or agreement filed with the Santa Fe office of the Commission.

(9) That the expanded waterflood project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations insofar as said Rules and Regulations are not inconsistent with this order.

IT IS THEREFORE ORDERED:

(1) That the applicant, Ryder Scott Management Company, is hereby authorized to expand its Artesia-Nichols Waterflood Project in the Artesia Pool by the injection of water through the following-described five additional wells in Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico:

LEASE	WELL NO.	LOCATION	SECTION
Western-Yates			
Collier State	1	Unit F	20
Rotary	7	2650' FNL and 2650' FWL	20
Rotary	8	2650' FNL and 1330' FEL	20
Vandeventer	2	1310' FNL and 1330' FEL	20
Mershon State	2	Unit D	21

(2) That that part of the aforesaid expanded waterflood project comprising the SE/4 NE/4 of Section 20 and the W/2 NW/4 of Section 21, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico, shall continue to be designated a waterflood buffer zone wherein wells may be produced at maximum capacity.

(3) That that part of the aforesaid expanded waterflood project comprising the SW/4 NW/4, E/2 NW/4, W/2 NE/4, NE/4 NE/4, and the NW/4 SE/4 of the aforesaid Section 20 is hereby designated a waterflood buffer zone wherein wells may be produced at maximum capacity for a temporary period of 90 days, effective the date of this order.

(4) That effective 90 days from the date of this order, that part of the expanded waterflood project comprising the SW/4 NW/4, E/2 NW/4, W/2 NE/4, NE/4 NE/4, and the NW/4 SE/4 of the aforesaid Section 20 is hereby designated an area wherein transfer of allowances between lenses is permitted, provided by that date said area has been unitized or otherwise consolidated, or provided all persons owning working interests and/or royalty interests within

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CASE No. 3678  
Order No. R-3341

said area have so agreed and evidence of such unitization, consolidation, or agreement has been furnished the Santa Fe office of the Commission.

(5) That the expanded waterflood project authorized by Order (1) and modified by Orders (2), (3), and (4) of this order shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations insofar as said Rules and Regulations are not inconsistent with this order.

(6) That monthly progress reports of the expanded waterflood project authorized by Order (1) and modified by Orders (2), (3), and (4) shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.


(7) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
DAVID F. CARGO, Chairman

  
GUYTON B. HAYS, Member

  
A. L. PORTER, Jr., Member & Secretary

  
ssr/

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

March 5, 1968

C Ryder Scott Management Company  
922 Eighth Street  
Wichita Falls, Texas 76301

Attention: Mr. John N. Moffet

Re: Case No. 3678  
Order No. R-3341

O  
P  
Y  
Gentlemen:

This is to acknowledge receipt of the executed copies of the agreement entered into by all parties owning interest in certain leases in Section 20, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico, which are included in your Artesia Nichols Waterflood Project.

Pursuant to the provisions of Order No. R-3341, dated November 9, 1967, that portion of the expanded waterflood project comprising the SW/4 NW/4, E/2 NW/4, W/2 NE/4, NE/4 NE/4 and the NW/4 SE/4 of Section 20, Township 18 South, Range 28 East is hereby designated an area wherein transfer of allowables between leases is permitted, provided however, that said allowables shall be assigned in accordance with the provisions of Rule 701 of the Commission Rules and Regulations. That portion of the waterflood project comprising the SE/4 NE/4 of Section 20 and the W/2 NW/4 of Section 21 shall continue to be designated a waterflood buffer zone wherein wells may be produced at maximum capacity. As noted in our previous letter regarding this waterflood project, the prorated portion of the flood will have a maximum allowable of 336 barrels of oil per day when Southeast normal unit allowables are 42 barrels or less.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/DSN/esr

cc: Oil Conservation Commission - Artesia

RYDER SCOTT MANAGEMENT COMPANY

922 EIGHTH STREET

PHONE (817) 723-5313

WICHITA FALLS, TEXAS 76301

February 9, 1968

*File 3678  
Case of  
W/ copy of  
and present  
letter*

Mr. Dan S. Nutter  
Chief Engineer  
New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Case #3678  
Order # R-3341

Dear Mr. Nutter:

As per the above order please find attached originals of Agreement for Transfer of Allowables under subject order from all Working Interest and Royalty Interest owners.

I believe this is what the order calls for and should allow us allowable transfers between wells.

Yours very truly,

RYDER SCOTT  
MANAGEMENT COMPANY

*John N. Moffet*  
John N. Moffet

JNM:jsh

Attch.

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AGREEMENT AUTHORIZING  
TRANSFER OF ALLOWABLES

THIS AGREEMENT, made and entered into by and between the parties subscribing hereto, such parties being hereinafter referred to as "Parties Hereto,"

W I T N E S S E T H:

WHEREAS, the Oil Conservation Commission of the State of New Mexico, by its Order No. R-3341, entered in Case No. 3678 on November 9, 1967, (the "Order"), authorized the expansion of Ryder Scott Management Company's Artesia Nichols Waterflood Project, Eddy County, New Mexico, by the injection of water through five wells located in Sections 20 and 21, Township 18 South, Range 28 East, N.M.P.M., Eddy County, New Mexico; and

WHEREAS, the Parties Hereto are all of the owners of royalty, overriding royalty, production payment and working interests in the five leases included within the project area and covering the following lands in Township 18 South, Range 28 East, N.M.P.M., Eddy County, New Mexico, to-wit:

- Lease #1 - Ryder Scott Management Company Humble A  
Lease embracing NE/4 NE/4 Section 20;
- Lease #2 - Ryder Scott Management Company Vandeventer  
Lease embracing NW/4 NE/4 Section 20;
- Lease #3 - Ryder Scott Management Company Rotary  
State Lease embracing SW/4 NE/4, NW/4 SE/4  
Section 20;
- Lease #4 - Ryder Scott Management Company Amerada  
State Lease E-1313, embracing NE/4 NW/4  
Section 20;
- Lease #5 - Ryder Scott Management Company Western-  
Yates State Lease 647, embracing S/2 NW/4  
Section 20,

and this agreement shall only include the Grayburg and San Andres formations underlying the above described lands under the terms of said oil and gas leases, which said formations underlying said lands and such additional lands as may be authorized as an expansion of the Artesia Nichols Waterflood Project by the applicable regulatory authority will hereinafter be referred to as the "Project Area"; and

WHEREAS, the Parties Hereto recognize that the creation or attempted creation of an artificial water drive by the injection of water into the producing intervals of the

Grayburg and San Andres formations through the water input wells provided for in the Order is a reasonable and prudent producing and engineering practice and the Parties Hereto desire to provide for the transfer of allowables within the Project Area.

NOW, THEREFORE, in consideration of the mutual covenants and agreements to be kept and performed by the Parties Hereto, it is agreed as follows:

1. This agreement shall become effective on February 9, 1968, or on such earlier date on which all of the interest owners have executed a counterpart hereof, and this agreement shall remain in force and effect for so long as water is being injected through input wells in the Project Area.

2. In compliance with the Order the Parties Hereto authorize the working interest owners to transfer allowables from any well to any other well within the Project Area.

3. The working interest owners shall separately measure the production of oil and gas from the Project Area and shall continue to account for the production of oil and gas to all interest owners on a lease by lease basis. Subject to the provisions of the Order, the working interest owners shall produce at capacity each producing well within the Project Area and nothing herein shall be construed to permit the working interest owners to voluntarily reduce the production of oil or gas from any producing well within the Project Area.

4. This agreement shall be binding upon each signatory party hereto and may be executed in any number of counterparts with each such counterpart so executed to have the same force and effect as an original instrument and as if all of the parties to the aggregate counterparts had signed the same document.

IN WITNESS WHEREOF, the Parties Hereto have executed this agreement in multiple originals as of the date provided for in paragraph No. 1 hereof.

Water Flood Associates, Inc.  
By: M.W. Staples, Pres.

RYDER-SCOTT MANAGEMENT CO.  
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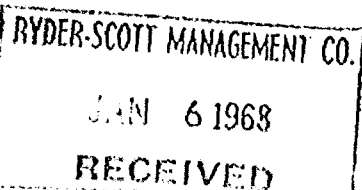
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---

*Martha Hester*

Martha Hester, individually and as  
Independent Executrix of the Estate  
of T. A. Hester, Deceased





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IN WITNESS WHEREOF, the Parties Hereto have executed this agreement in multiple originals as of the date provided for in paragraph No. 1 hereof.

Alexander Dickerson

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HUMBLE OIL & REFINING COMPANY

  
Attorney-in-Fact

RYDER-SCOTT MANAGEMENT CO.

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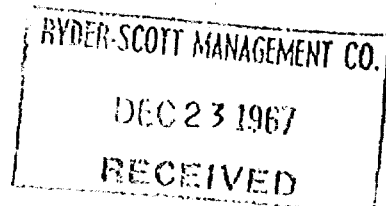
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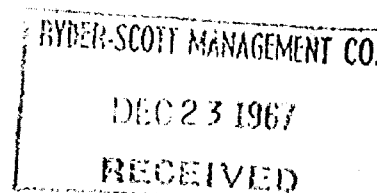
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GW Hutchins

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Rhodia Mae Christensen

Charles M. Christensen



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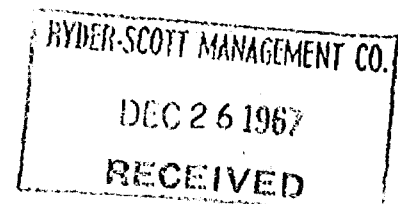
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W. H. Ragsdale

Dec 22-1967



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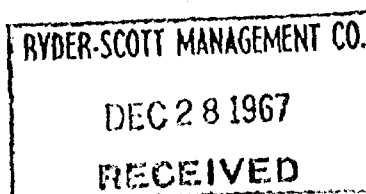
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Lamar Hunt

\_\_\_\_\_



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AGREEMENT AUTHORIZING  
TRANSFER OF ALLOWABLES

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State Lease embracing SW/4 NE/4, NW/4 SE/4  
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State Lease E-1313, embracing NE/4 NW/4  
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Yates State Lease 647, embracing S/2 NW/4  
Section 20,

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WHEREAS, the Parties Hereto recognize that the creation or attempted creation of an artificial water drive by the injection of water into the producing intervals of the

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M. C. Waters  
753 W. Lawrence  
Arlene, N. M.

RYDER-SCOTT MANAGEMENT CO.

JAN 11 1968

RECEIVED

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AGREEMENT AUTHORIZING  
TRANSFER OF ALLOWABLES

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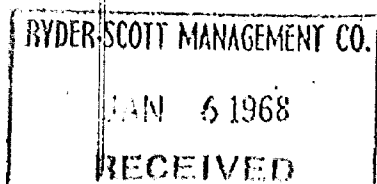
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Tr. W. Staples





AGREEMENT AUTHORIZING  
TRANSFER OF ALLOWABLES

MAIN OFFICE  
FEB 12 AM 8 26

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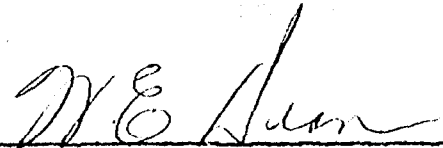
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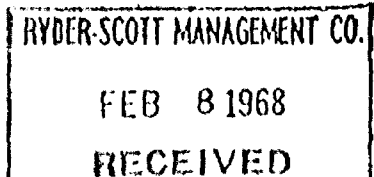
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MAIN OFFICE  
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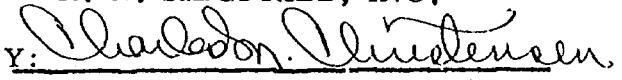
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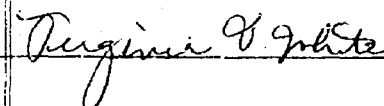
Attest:

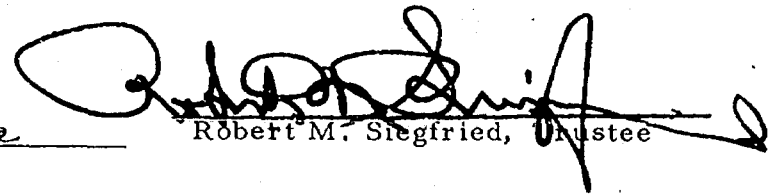
  
Asst. Secretary

R. H. SIEGFRIED, INC.

BY:   
Charles M. Christensen, Vice-Pres.

Witness:



  
Robert M. Siegfried, Trustee

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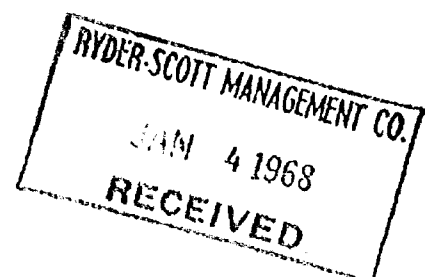
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James H. Del



GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

State of New Mexico  
**Oil Conservation Commission**



LAND COMMISSIONER  
GUYTON B. HAYS  
MEMBER

STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

P. O. BOX 2088  
SANTA FE

November 14, 1967

Mr. A. J. Losee  
Attorney at Law  
Post Office Box 239  
Artesia, New Mexico 88210

Dear Sir:

Reference is made to Commission Order No. R-3341, recently entered in Case No. 3678, approving the expansion of Ryder Scott Management Company's Artesia Nichols Waterflood Project.

Injection is to be through the five newly authorized water injection wells as follows:

Rotary No. 7, Rotary No. 8, and Vandeventer No. 2 (new injection wells):

Injection into Metex, Premier, and Lovington zones through tubing under a packer set between the Loco Hills zone and the Metex zone. 4½ inch casing to be set through the Lovington zone and cemented with sufficient cement to come back to at least 100 feet above the uppermost perforation in the Loco Hills zone. Injection into the Loco Hills zone shall be through the casing-tubing annulus.

Collier No. 1 (old well converted):

Injection into the Metex, Premier, and Lovington zones shall be through tubing under a packer set between the Loco Hills zone and the Metex zone. Injection into the Loco Hills zone shall be through the casing-tubing annulus.

-2-

Mr. A. J. Losee  
Artesia, New Mexico  
November 14, 1967

Mershon No. 2 (old well converted):

Initial injection shall be down the casing into the Loco Hills, Metex, and Premier zones. A liner and tubing and packer or tubing and formation packer may be run later if performance requires selective injection between the Loco Hills zone and the Metex and Premier zones.

Casing in the latter two wells, Collier No. 1 and Mershon No. 2, shall be pressure-tested prior to placing the wells on injection. The casing must satisfactorily hold a 3000 psi test pressure for 30 minutes. Operator shall notify the Artesia district office of the Commission of the date and hour said pressure tests are to be conducted.

As to allowable, this project shall continue to receive capacity allowables for the wells in the designated waterflood buffer zone which comprises the SE/4 NE/4 of Section 20 and the W/2 NW/4 of Section 21, Township 18 South, Range 28 East. In addition, the wells in the remainder of the project area shall be permitted to produce at capacity until February 9, 1968, at which time each individual lease will be considered a project area of its own subject to regular assignment of waterflood allowable earned on that lease only, unless by that date the Commission's Santa Fe office has received evidence of unitization or consolidation of said leases or evidence of agreement by all parties owning working interests, over-riding royalty interests, and royalty interests to the treatment of the area as unitized with the privilege of transfer of allowables across the lease lines. In the event of such unitization, consolidation, or agreement, the project area (exclusive of the above-described buffer zone) shall comprise the NE/4 NE/4, W/2 NE/4, E/2 NW/4, SW/4 NW/4, and NW/4 SE/4 of Section 20, Township 18 South, Range 28 East, and when all of the authorized injection wells have been placed on active injection, the maximum allowable which the project area will be eligible to receive under the provisions of Rule 701-E-3 is 336 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.



-3-

Mr. A. J. Losee  
Artesia, New Mexico  
November 14, 1967

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/DSN/ir

cc: Oil Conservation Commission - Hobbs and Artesia, N. Mex.

Mr. Frank Irby, State Engineer Office, Santa Fe, New Mexico

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

State of New Mexico  
**Oil Conservation Commission**



LAND COMMISSIONER  
GUYTON B. HAYS  
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P. O. BOX 2088  
SANTA FE

November 13, 1967

Mr. A. J. Losee  
Attorney at Law  
Post Office Box 239  
Artesia, New Mexico 88210

Re: Case No. 3678  
Order No. R-3341  
Applicant:  
RYDER SCOTT MANAGEMENT CO.

Dear Sir:

Enclosed herewith is a copy of the above-referenced Commission order recently entered in the subject case. Letter pertaining to conditions of approval and maximum allowable to follow.

Very truly yours,

*A. L. Porter, Jr.*  
A. L. PORTER, Jr.  
Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC X  
Artesia OCC X  
Aztec OCC \_\_\_\_\_  
State Engineer X

Other \_\_\_\_\_

JOEL M. CARSON

LAW OFFICES  
A. J. LOSEE  
CARPER BUILDING - P. O. DRAWER 239  
ARTESIA, NEW MEXICO 88210

AREA CODE 505  
746-3508

11 October 1967

*Case 3678*

Mr. A. L. Porter, Jr.  
Secretary-Director  
New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico

MAIN

67 OCT 13 1967


Re: Application of Ryder Scott Management Company  
for Expansion of Waterflood Project in  
Artesia Pool, etc.

Dear Mr. Porter:

Supplementing the application filed with our letter of September 3, 1967, we herewith enclose diagramatic sketches of each of the five proposed injection wells referred to in paragraph number 4 of our application.

If there is anything further we can furnish you before the hearing, please let us know.

Very truly yours,

  
A. J. Losee

AJL:rh  
Enclosures

cc: Certified Mail  
Return Receipt Requested  
Mr. Frank E. Irby, Chief  
Water Rights Division  
State Engineer Office  
Santa Fe, New Mexico  
w/ enclosures

Case 3678

Heard 10-25-67

Rec. 10-31-67.

Approve Ryder Scott Management Co's  
5 injection wells as listed on page 2  
of the application.

Also approve the smoothbore locations  
of the Vandeventer #2, 1330/E, 1310/N-20  
Rotary #7, 2650/N, 2650/W-20  
" " #8, 1330/E, 2650/N-20

Order R-2272A grants a buffer zone  
of 3-40A tracts. SW NE, W/2 NW  
(Sec. 20) (Sec. 21)  
It was stated at the hearing that  
they could obtain agreements from  
the interests in the tract flood  
in 90 days. Therefore give them  
permission to <sup>Capillary</sup> transfer allowable  
for a period of 90 days.

Thos. W. J.

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 2588  
Order No. R-2272-A

APPLICATION OF WATER FLOOD ASSOCIATES,  
INC. FOR THE ESTABLISHMENT OF A BUFFER  
ZONE, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on June 28, 1962, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 17th day of July, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Water Flood Associates, Inc., is the operator of the SE/4 NE/4 of Section 20 and the W/2 NW/4 of Section 21, all in Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico, in which area a waterflood project was approved by Order No. R-2272, entered in Case No. 2582 on June 21, 1962.
- (3) That the applicant, Water Flood Associates, Inc., seeks the establishment of the above-described acreage as a buffer zone in its proposed waterflood project in the Artesia Pool, with wells in said buffer zone to be assigned capacity allowables.
- (4) That Graridge Corporation presently is conducting a waterflood project with unrestricted rates of production in the area immediately adjacent to the subject acreage.
- (5) That in order to protect the correlative rights of the applicant, the subject application should be approved.

--2--

CASE No. 2588  
Order No. R-2272-A

IT IS THEREFORE ORDERED:

(1) That the SE/4 NE/4 of Section 20 and the W/2 NW/4 of Section 21, all in Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico, is hereby established as a buffer zone. The applicant, Water Flood Associates, Inc., is hereby authorized to operate its waterflood project on said acreage at unrestricted rates of production.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 2582  
Order No. R-2272

APPLICATION OF WATER FLOOD ASSOCIATES,  
INC. FOR APPROVAL OF A WATERFLOOD PROJ-  
ECT, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on June 7, 1962, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 21st day of June, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Water Flood Associates, Inc., is the operator of the SE/4 NE/4 of Section 20 and the W/2 NW/4 of Section 21, all in Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico.

(3) That the applicant requests approval of a waterflood project in the Artesia Pool on the above-described lands with the injection of water to be through its Mershon State Well No. 3, located in the SW/4 SW/4 NW/4 of said Section 21.

(4) That the wells in the proposed project area are in an advanced stage of depletion and should be classified as "stripper" wells.

(5) That approval of the subject application will neither cause waste nor impair correlative rights; provided, however,

-2-

CASE No. 2582  
Order No. R-2272

that unless agreed to by all parties, the transfer of allowables across lease lines where royalty ownership is diverse should not be authorized.

IT IS THEREFORE ORDERED:

(1) That the applicant, Water Flood Associates, Inc., is hereby authorized to institute a waterflood project in the Artesia Pool by the injection of water through its Mershon State Well No. 3, located in the SW/4 SW/4 NW/4 of Section 21, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico.

(2) That the waterflood project shall be governed by Rule 701, including the allowable provisions thereof.

PROVIDED HOWEVER, That unless otherwise agreed to by all parties and evidence thereof furnished the Commission, the transfer of allowables within the project area of this waterflood shall be authorized only insofar as the transfer is made between wells having common royalty ownership.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/



BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF :  
RYDER SCOTT MANAGEMENT COMPANY FOR :  
EXPANSION OF A WATERFLOOD PROJECT, :  
ARTESIA POOL, EDDY COUNTY, NEW MEXICO :  
WITH BUFFER ZONE UNLIMITED ALLOWABLES :  
AND FOR AN EXCEPTION TO THE WELL :  
LOCATION REQUIREMENTS OF RULE 104 OF :  
THE OIL CONSERVATION COMMISSION. :

3678  
No. 57 Oct 5 AM 11 20

APPLICATION

COMES RYDER SCOTT MANAGEMENT COMPANY, by its attorney, A. J. Losee, and states:

1. On June 7, 1962 and on July 17, 1962, the Oil Conservation Commission ("Commission") by Order Nos. R-2272 and R-2272-A, respectively, authorized the establishment of a waterflood project on the SE/4 NE/4 Section 20 and W/2 NW/4 Section 21, Township 18 South, Range 28 East, N.M.P.M., as a buffer zone with capacity allowables.

2. Applicant is the operator and Waterflood Associates, Inc. is the owner of eight producing oil wells and one abandoned well offsetting the above lands in the Artesia Pool, Eddy County, New Mexico and within the proposed area covered by this application, to-wit:

Township 18 South, Range 28 East, N.M.P.M.,

Section 20: NE/4 NE/4, W/2 NE/4, NE/4 NW/4,  
S/2 NW/4, W/2 SE/4

Section 29: NW/4 NE/4

containing 360 acres, more or less.

3. There is attached hereto and by reference made a part hereof, a plat showing the location of the original waterflood project area and the expanded waterflood project area, the wells therein and the location of all other wells and leases within a radius of one mile from the project area.

4. The producing wells within the project area have reached an advanced or "stripper" state of depletion and the Applicant proposes to inject water into the producing or once producing Grayburg and San Andres formations of the hereinafter described wells in sufficient quantities and under sufficient pressure to stimulate the production of oil from the wells in the project area, said injection wells being described as follows:

Mershon State Well No. 2 located in the NW/4 NW/4 Section 21;

Western-Yates Collier State Well No. 1 located in the SE/4 NW/4 Section 20;

Vandeventer Well No. 2 to be located at an unorthodox location in the NW/4 NE/4 Section 20;

Rotary State Well No. 7 to be located at an unorthodox location in the NW/4 SE/4 Section 20; and

Rotary State Well No. 8 to be located at an unorthodox location in the NW/4 SE/4 Section 20.

5. There is attached hereto and by reference made a part hereof a copy of the producing portions of the logs of the Mershon State Well No. 2 and the Western-Yates Collier State Well No. 1.

6. Applicant proposes to selectively inject the water down the casing annulus and down the tubing and will submit, prior to the hearing on this application, a diagrammatic sketch of each of the proposed injection wells including

all casing strings, diameters and setting depths, quantities used and tops of cement and perforated or open-hole intervals.

7. Applicant is presently purchasing water for this project from offsetting waterflood projects operated by Cima Capitan and Fina but proposes in the near future to complete the development of its own water supply for the project.

8. Applicant proposes to initially inject water into the Loco Hills zone at a rate of near 200 barrels per day and at a well-head pressure near 2700 p.s.i. Applicant proposes to initially inject water into the Metex, Premier and Lovington zones at a rate of near 600 barrels per day and at a pressure near 2700 p.s.i.

9. The approval of the said expansion of the previously authorized waterflood project as a buffer zone with unrestricted rates of production for said expanded project area will prevent waste and is necessary to protect correlative rights.

10. In the alternative to the allegations of paragraph 9, the approval of the said expansion of the previously authorized waterflood project with authority to transfer allowables between leases with the expanded project area will prevent waste and is necessary to protect the correlative rights.

11. Applicant proposes to drill, as an exception to well location requirements of Rule 104 of the Commission, three new injection wells as follows:

Rotary State No. 7 - 2650' FNL & 2650' FWL of Section 20;

Rotary State No. 8 - 1330' FEL and 2650' FNL of Section 20; and

Vandeventer State No. 2 - 1330' FEL and 1310' FNL  
of Section 20.

12. The approval of these unorthodox injection well locations will be in the interest of conservation and will protect correlative rights.

WHEREFORE, Applicant prays the orders of the Commission as follows:

1. That this matter be set for hearing before an examiner duly appointed by the Commission and that due notice be given thereof as required by law.

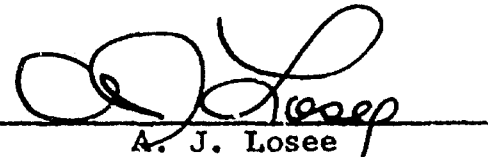
2. That after hearing, an order be entered authorizing the Applicant to expand the already existing waterflood project as either (a) a buffer zone with unrestricted rates of production or (b) with authority to transfer allowables between the leases in the expanded project area.

3. That after hearing, an order be entered authorizing the drilling of the three aforesaid injection wells at unorthodox locations as an exception to Rule 104 of the Commission.

4. And for such other relief as may be just in the premises.

RYDER SCOTT MANAGEMENT COMPANY

By



A. J. Losee

Attorney for Applicant  
P. O. Drawer 239  
Artesia, New Mexico

Docket No. 33-67

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 25, 1967

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Elvis A. Utz, Examiner, or Daniel S. Nutter, Alternate Examiner:

CASE 3668: Application of Mobil Oil Corporation for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the triple completion (conventional) of its Bridges State Well No. 121 located in Unit L of Section 13, Township 17 South, Range 34 East, Lea County, New Mexico, to produce oil from the North Vacuum-Abo, Vacuum-Upper Pennsylvanian, and Vacuum-Middle Pennsylvanian Pools, through parallel strings of tubing.

CASE 3669: Application of Amerada Petroleum Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project on its State "VA" Lease by the injection of water into the Grayburg-San Andres formation through two wells located in Units K and M of Section 23, Township 17 South, Range 34 East, Vacuum Pool, Lea County, New Mexico.

CASE 3670: Application of Amerada Petroleum Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (combination) of its State "MA" Well No. 3 located in Unit M of Section 24, Township 11 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the Moore-Wolfcamp Gas Pool and oil from the Moore-Pennsylvanian Pool through tubing installed in parallel strings of 2 7/8 inch and 3 1/2 inch casing, respectively, cemented in a common well bore.

CASE 3671: Application of Amerada Petroleum Corporation for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Pennsylvanian formation, Bagley Field, Lea County, New Mexico, through the following three wells, all located in Township 12 South, Range 33 East:

L. H. Chambers Well No. 2, Unit C of  
Section 11; Disposal Interval - 9005  
to 9393 feet;

State BT "D" Well No. 4, Unit N of  
Section 2; Disposal Interval - 8979  
to 9291 feet;

J. T. Caudle Well No. 1, Unit H of  
Section 10; Disposal Interval - 9001 to  
9326 feet;

CASE 3672: Application of Charles B. Read and Len Mayer for back allowable, Eddy County, New Mexico. Applicants, in the above-styled cause, see the assignment of back allowable for the period from

April 7, 1967, to August 3, 1967, to their Irene Brainard Well No. 1 located in Unit E of Section 20, Township 18 South, Range 26 East, Atoka-Pennsylvanian Pool, Eddy County, New Mexico, said period being from the date of completion of the well to the date of approval by the Federal Power Commission for the sale of gas from said well.

- CASE 3673: Application of Ralph Lowe for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Yates formation in the interval 2964 feet to 2982 feet in his Humble State Well No. 1 located in Unit G of Section 36, Township 25 South, Range 36 East, Jalmat Pool, Lea County, New Mexico.
- CASE 3674: Application of Robert N. Enfield for the amendment of Order No. R-3189, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3189 which pooled all mineral interests in the Chaveroo-San Andres Pool underlying the NW/4 NW/4 of Section 11, Township 8 South, Range 33 East, Chaves County, New Mexico. Applicant specifically seeks the amendment of paragraph (9) of Order No. R-3189 to fix \$125.00 per month as a reasonable charge for supervision and operational overhead for the subject well and to authorize the applicant to withhold from production the proportionate share of said \$125.00 and the proportionate share of actual operating costs of said well attributable to each non-consenting working interest.
- CASE 3675: Application of Gulf Oil Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the North Hackberry Yates Unit Area comprising 720 acres, more or less, of Federal Lands in Sections 23 and 24, Township 19 South, Range 30 East, Eddy County, New Mexico.
- CASE 3676: Application of Gulf Oil Corporation for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Yates formation through eight wells in Sections 23 and 24, Township 19 South, Range 30 East, North Hackberry-Yates Pool, Eddy County, New Mexico.
- CASE 3677: Application of Dugan Production Corporation for special pool rules, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Salt Creek-Dakota Oil Pool, San Juan County, New Mexico, to permit the drilling of wells on 2 1/2 acre spacing provided that no well be located nearer than 165 feet to the outer boundary of the quarter-quarter section and no nearer than 200 feet to another well producing from the same pool, and provided further, that a 40-acre proration unit would be subject to a 40-acre allowable regardless of the number of wells on the unit.
- CASE 3678: Application of Ryder Scott Management Company for a waterflood expansion, waterflood buffer zone, and several unorthodox locations, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the expansion of its Artesia-Nichols Waterflood Project,

Township 18 South, Range 28 East, Artesia Pool, Eddy County, New Mexico, by the conversion of its Western-Yates Collier State Well No. 1 located in Unit F of Section 20 and its Mershon State Well No. 2 located in Unit D of Section 21. Applicant further proposes to drill three additional water injection wells at the following unorthodox locations in Section 20: 2650 feet from the North and West lines; 2650 feet from the North line and 1330 feet from the East line; and 1310 feet from the North line and 1330 feet from the East line. Applicant further seeks the designation of the W/2 NW/4 of Section 21 and the SW/4 NW/4, E/2 NW/4, NE/4, and W/2 SE/4 of Section 20 and the NW/4 NE/4 of Section 29 as a waterflood buffer zone with capacity allowables, or as an area wherein transfer of allowable between leases would be permitted.

CASE 3679: Application of Sinclair Oil & Gas Company for the amendment of Order No. R-2854, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-2854, which order established a 160-acre non-standard gas proration unit comprising the W/2 SW/4, SE/4 SW/4, and SW/4 SE/4 of Section 26, Township 21 South, Range 37 East, Tubb Gas Pool, Lea County, New Mexico, to be dedicated to applicant's J. R. Cone "A" Well No. 2 located in Unit L of said Section 26. Applicant now seeks the dedication of said unit to its J. R. Cone "B" Well No. 1 located in Unit N of said Section 26.

CASE 3680: Application of Texaco Inc. for an unorthodox location, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to recomplete its State "CT" Well No. 4 at an unorthodox location 660 feet from the North line and 1980 feet from the West line of Section 35, Township 7 South, Range 35 East, in the Todd-Upper San Andres Pool, Roosevelt County, New Mexico, in exception to the pool rules which require wells to be located in the NE/4 or the SW/4 of the Section.

JOEL M. CARSON

LAW OFFICES  
A. J. LOSEE  
CARPER BUILDING - P. O. DRAWER 239  
ARTESIA, NEW MEXICO 88210

AREA CODE 505  
746-3508

October 3, 1967

*Case 3678*

Mr. A. L. Porter, Jr.  
Secretary-Treasurer  
New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico

67 OCT 5 AM 11 29

Dear Mr. Porter:

Enclosed herewith you will please find three copies of the application of Ryder Scott Management Company for expansion of a waterflood project in the Artesia Pool, Eddy County, New Mexico and for an exception to the well location requirements of Rule 104 of the Commission to permit the drilling of three injection wells at unorthodox locations, together with one copy of the attached data therein described.

With a copy of this letter, we are furnishing Mr. Irby with a copy of the application and a copy of the data therein referred to.

You will each note that the diagrammatic sketches of the injection wells are not included with the application but these sketches will be transmitted in the next few days.

It is my understanding that this matter will be set for hearing before an examiner on October 25.

Very truly yours,

  
A. J. Losee

AJL/bb

Enclosures

DOCKET MAILED

Date 10-11-67



Mr. A. L. Porter, Jr.

Page 2

October 3, 1967

cc: Mr. Frank E. Irby, Chief  
Water Rights Division  
State Engineer Office  
Santa Fe, New Mexico  
w/enclosures

Certified Mail-Return Receipt Requested

Mr. John N. Moffett  
Ryder Scott Management Company  
922 Eighth Street  
Wichita Falls, Texas 76301

RYDER SCOTT MANAGEMENT COMPANY

922 EIGHTH STREET

PHONE (817) 723-5313

WICHITA FALLS, TEXAS 76301

NICHOLS ARTESIA PROJECT

MONTHLY PRODUCTION BY WELLS

Date	Humble		Mershon		Powell	Rotary			Vandeventer
	#1	#2A	#1	#2	#1	#4	#5	#6	#1
3/64	39	-0-	1116	404	39	45	248	221	30
4/64	36	-0-	1050	356	36	45	258	180	27
5/64	22	-0-	864	344	31	40	250	177	32
6/64	46	-0-	849	248	30	40	221	168	40
7/64	43	8	850	345	37	40	222	170	32
8/64	42	7	826	325	37	42	224	172	35
9/64	43	23	800	293	30	44	197	120	44
10/64	25	18	800	295	27	44	190	117	232
11/64	40	-0-	650	237	34	39	140	100	443
12/64	79	-0-	700	259	35	60	200	154	562
1/65	69	-0-	613	279	30	52	185	124	673
2/65	61	-0-	600	202	28	42	167	120	677
3/65	64	41	620	180	25	36	184	124	683
4/65	62	23	561	240	29	90	150	100	614
5/65	100	37	558	218	25	93	124	103	564
6/65	45	84	480	241	16	120	74	150	426
7/65	55	123	389	114	29	124	93	94	279
8/65	60	142	558	126	33	95	94	124	136
9/65	62	133	543	120	32	105	95	124	124
10/65	63	209	514	120	32	161	186	186	111
11/65	59	199	512	90	25	374	180	180	94
12/65	53	240	520	108	27	755	180	180	97

*Handwritten signature/initials*

BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
CASE NO.	3678

#2

Ryder Scott Management Company  
Nichols Artesia Project  
Monthly Production by Wells  
Page -2-

Date	Humble		Mershon		Powell	Rotary			Vandeventer
	#1	#2A	#1	#2	#1	#4	#5	#6	#1
1/66	69	229	465	104	30	814	150	186	85
2/66	50	259	427	84	27	812	140	155	84
3/66	45	323	428	93	28	930	254	155	95
4/66	40	327	392	90	19	900	347	155	85
5/66	43	400	373	93	29	930	409	186	96
6/66	40	522	341	90	13	930	449	180	96
7/66	43	589	344	93	25	1085	132	186	84
8/66	43	640	311	93	26	443	248	186	61
9/66	49	575	295	83	29	546	180	154	53
10/66	23	406	280	69	17	491	246	82	74
11/66	19	884	234	100	27	419	264	157	742
12/66	110	1115	228	93	25	527	310	209	826
1/67	3	1016	234	99	18	902	310	185	495
2/67	53	787	211	95	27	810	183	154	205
3/67	113	1012	232	115	21	663	150	121	157
4/67	91	859	217	93	9	551	124	101	121
5/67	94	1252	231	94	18	495	111	91	135
6/67	69	1412	198	90	21	397	95	60	171
7/67	65	1534	202	94	24	370	96	53	153
8/67	69	1259	175	75	25	347	65	68	74

R. D. COLLIER WELLS

TOTAL PRODUCTION 1/1/67 to 9/1/67

<u>Lease, Well No.</u>	<u>Unit/Sec.</u>	<u>Production</u>
Amerada State #1	C/20	220
Western Yates #1	F/20	212
Western Yates #2	E/20	212

RYDER SCOTT MANAGEMENT COMPANY  
NICHOLS ARTESIA PROJECT  
CUMULATIVE PRODUCTION BY WELLS

<u>Lease, Well Number</u>	<u>Unit/Sec.</u>	<u>1/1/64</u>	<u>1/1/65</u>	<u>1/1/66</u>	<u>1/1/67</u>	<u>9/1/67</u>
Humble State #1	H/20	7,662	8,136	8,876	9,446	10,003
Humble St. "A" #2	A/20	---	4,307	5,527	11,764	20,895 +
Mershon State #1	E/21	44,892	55,648	62,262	66,360	68,060 +
Mershon State #2	D/21	22,291	26,570	28,598	29,679	30,434 +
Mershon State #3 *	E/21	2,558	2,558	2,558	2,558	2,558
Powell State #1	M/17	9,023	9,426	9,730	10,025	10,188
Rotary State #4	G/20	19,027	19,584	21,247	30,062	34,597-
Rotary State #5	J/20	15,861	18,645	20,168	23,405	24,539-
Rotary State #6	B/29	7,836	9,715	11,860	13,846	14,679
Vandeventer St. #1	B/20	9,000	10,548	15,007	17,383	18,894
R. D. COLLIER WELLS						
Amerada State #1	C/20			19,477	19,697	
Western Yates St. #1	F/20			6,675	6,887	
Western Yates St. #2	E/20			6,028	6,240	

\* Mershon #3 converted to injection in June, 1962.

# RYDER SCOTT MANAGEMENT COMPANY

## NICHOLS ARTESIA PROJECT

### WELL DATA

Artesia Pool  
Eddy County, N. M.  
T 18 S, R 28 E

Lease Name, Well Number Location	Unit/ Sec.	Elev.	Date Completed	Surface Casing	Production Casing	T. D. / PBD	Treatment/Remarks
Humble State #1 1980' FNL & 990' FEL	H/20	3598' GL	2/9/58	8-5/8" @ 500' w/100 sx.	5-1/2" @ 2485' w/175 sx.	2485'	Perf: 2023-31, 2128-32, 2135-42, 2243-57, 2279-86, 2294-97, 2302-06, 2454-60. Frac: (2/58) 50,000 gal. 60,000# (6/63) well acidized and frac'd.
Humble State "A" #2* 660' FNL & 660' FEL	A/20	3602 GL	11/1/57	8-5/8" @ 645' w/100 sx.	5-1/2" @ 2554' w/130 sx.	2571' / 2554'	Perf: 2030-44, 2144-54, 2208-20, 2306-20. Frac: (11/57) 10,000 gal. & 15,000# in each of the above perforations. (11/66) Perf. 2460-70. Frac: 43,050 gal. & 27,000#.
* Original well record not in our files.							
Merchon State #1 2310' FNL & 990' FWL	E/21	3593' (Est.)	6/2/50	8-5/8" @ 339' w/25 sx.	7" @ 1718'	2172'	OH: 1718-2172 Shot: 120 qt. Nitro, 2145-2170.
Merchon State #2 990' FNL & 990' FWL	D/21	3600' (Est.)	9/21/50	8-5/8" @ 853 w/50 sx.	<del>No Record</del> 4 1/2" 2048'	2548'	OH: 853-2548 Shot: 120 qts. Nitro, 2050-2072
Merchon State #3 2310' FNL & 330' FWL	E/21	3596' GL	11/1/58	8-5/8" @ 520' w/50 sx.	5-1/2" @ 2368' w/100 sx.	2460'	Perf: 2030-50, 2174-90, 2280-2310. Frac: 30,000 gal., 45,000# Converted to injection well in June, 1962.
Rotary State #4 2130' FNL & 1980' FEL	G/20	3594' GL	11/6/57	8-5/8" @ 530'	5-1/2" @ 2445' w/160 sx.	2431'	Perf: 1990-2010, 2090-2120, 2220-60, 2415-25. Frac: (Nov. '57) 35,000 gal., 50,000# Frac: (Oct. '66) 32,280 gal. RediFrac & 24,000#

BEFORE EXAMINER UTZ  
OIL COMPANY  
CASE NO. 3678

RYDER SCOTT MANAGEMENT COMPANY

NICHOLS ARTESIA PROJECT

WELL DATA  
Page -2-

Artesia Pool  
Eddy County, N.M.  
T 18 S, R 31 E

Lease Name, Well Number Location	Unit/ Sec.	Elev.	Date Completed	Surface Casing	Production Casing	T.D./ P.B.T.D.	Treatment/Remarks
Rotary State #5 1980' FSL & 1980' FEL	J/20	3586' GL	1/5/58	8-5/8" @ 530' w/50 sx.	5-1/2" @ 2448' w/160 sx.	2448'	Perf: 1968-88, 2080-2100, 2120-30, 2232-62. 2390-2408. Frac: 40,000 gal., 40,000#.
Rotary State #6 330' FNL & 1650' FEL	B/29	3553' GL	8/6/58	8-5/8" @ 513' w/50 sx.	5-1/2" @ 2276' w/100 sx.	2276'	Perf: 1952-62, 2092-98, 2222-32. Frac: 40,000 gal., 60,000#.
Vandeventer State #1 330' FNL & 1980' FEL	B/20	3603' DF	3/18/49	No Record	7" @ 2374' w/75 sx.	3260'/ 2450'	Perf: 1997-2013, 2115-21, 2236-40, 2272-82 OH: 2374-2450. Frac: 2375-2444 w/10,000 gal. & 13,250#; 1997-2012 w/8,250 gal., 4,125#. Oct. '66-fract'd w/30,000# sand & rock salt & 29,190 gal. RediFrac.
Collier Amerada State #1 660' FNL & 2310' FWL	C/20	3603' GR	10/25/58	8-5/8" @ 515' w/50 sx.	5-1/2" @ 2325' w/100 sx.	2441'/ 2325'	Perf: 2262-80, 2098-2116 Frac: 23,300 gal., 33,600#.
Collier Western Yates St. #1 1650' FNL & 2310' FWL	F/20	3600' GR	4/3/61	8-5/8" @ 543' w/50 sx.	5-1/2" @ 2298' w/100 sx.	2442'	Perf: 1983-87, 1990-95, 2099-2109, 2171-75, 2265-67, 2270-74. Frac: 66,600 gal. water 55,000# sand.
Collier Western Yates St. #2 1650' FNL & 990' FWL	E/20	3600' GR	9/2/61	8-5/8" @ 548' w/50 sx.	5-1/2" @ 2312' w/100 sx.	2312'	Perf: 1970 & 2268 Frac: 34,600 gal. water & 45,000# sand.

WORKING INTEREST OWNERS  
ROYALTY OWNERS  
PRODUCTION PAYMENT  
OWNERS

APPROVED COPIES  
NICHOLS ARTESIA PROJECT



RYDER SCOTT MANAGEMENT COMPANY  
922 EIGHTH STREET  
PHONE (817) 723-5313  
WICHITA FALLS, TEXAS 76301

July 6, 1967

BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 7  
CASE NO. 3678

Re: Nichols-Artesia  
Waterflood Project  
Eddy County, N. M.

Gentlemen:

Since Ryder Scott Management Company took over the operations of subject water - flood project, considerable work has been done to increase production. This has been accomplished by way of cleaning out and fracturing producing wells and increasing injection in injection wells - both our own and Cima Capitan wells, which offset this project to the north.

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The American Petrofina Company of Texas, who is flooding southeast and adjoining this project, has unlimited allowables and we feel we should be treated in the same manner.

As a Working Interest, Production Payment or Overriding Royalty Owner we ask for your approval on the copy attached and return to this office at the earliest possible date.

We will all gain considerably by the approval of this application. Your immediate attention to this matter will be greatly appreciated.

Yours very truly,

RYDER SCOTT  
MANAGEMENT COMPANY,

*John N. Moffet*  
John N. Moffet

APPROVED:  
*Walter Flood Associates, Inc.*  
*By: W. W. Steger, President*

Date July 7, 1967

RYDER SCOTT MANAGEMENT COMPANY

922 EIGHTH STREET

PHONE (817) 723-5313

WICHITA FALLS, TEXAS 76301

July 6, 1967

Re: Nichols-Artesia  
Waterflood Project  
Eddy County, N. M.

Gentlemen:

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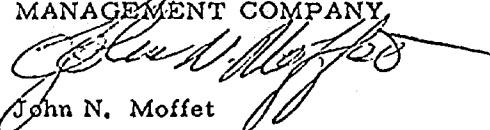
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Yours very truly,

RYDER SCOTT  
MANAGEMENT COMPANY

  
John N. Moffet

APPROVED:

M. W. Stegner

Date

July 7, 1967

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

# WESTERN UNION

## TELEGRAM

W. P. MARSHALL  
CHAIRMAN OF THE BOARD

R. W. MCFALL  
PRESIDENT

SYMBOLS

DL = Day Letter  
NL = Night Letter  
LT = International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination

1039A CDT SEP 20 67 NSA067

NS WEA064 ( TUB013) COLLECT FAX TULSA OKLA 20 901A CDT

RYDER SCOTT MANAGEMENT CO 213

922 8 ST WICHITA FALLS TEX

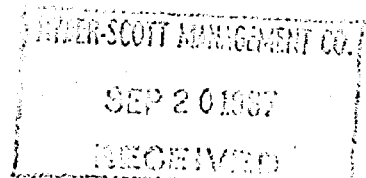
ATTENTION: JOHN MOFFETT

REGARDING NICHOLS ARTESI WATERFLOOD, YOUR JULY 6, 1967 LETTER

R H SIEGFRIED, INC. AND ROBERT M. SIEGFRIED, TRUSTEE APPROVE

T MAYFIELD PRVDUCTION MANAGER

(42).



RYDER SCOTT MANAGEMENT COMPANY

922 EIGHTH STREET

PHONE (817) 723-5313

WICHITA FALLS, TEXAS 76301

July 6, 1967

Re: Nichols-Artesia  
Waterflood Project  
Eddy County, N. M.

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Yours very truly,

RYDER SCOTT  
MANAGEMENT COMPANY

*John N. Moffet*  
John N. Moffet

APPROVED:

\_\_\_\_\_  
Date \_\_\_\_\_

RYDER SCOTT MANAGEMENT COMPANY

922 EIGHTH STREET

PHONE (817) 723-5313

WICHITA FALLS, TEXAS 76301

July 6, 1967

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Yours very truly,

RYDER SCOTT  
MANAGEMENT COMPANY

*John N. Moffet*  
John N. Moffet

APPROVED:  
*Rhodia Mae Christensen*  
*Charles M. Christensen*  
Date July 8, 1967

RYDER SCOTT MANAGEMENT COMPANY

922 EIGHTH STREET

PHONE (817) 723-5313

WICHITA FALLS, TEXAS 76301

July 6, 1967

Re: Nichols-Artesia  
Waterflood Project  
Eddy County, N. M.

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Yours very truly,

RYDER SCOTT  
MANAGEMENT COMPANY

*John N. Moffet*  
John N. Moffet

APPROVED:

*Dennis Wilkerson*

Date

7/19/67

RYDER SCOTT MANAGEMENT COMPANY

922 - GUTH STREET  
PHONE (817) 723-5313  
WICHITA FALLS, TEXAS 76301

July 6, 1967

Re: Nichols-Artesia  
Waterflood Project  
Eddy County, N. M.

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Yours very truly,

RYDER SCOTT  
MANAGEMENT COMPANY

John N. Moffet

Martha Hester, Individually and as  
Independent Executrix of the Estate  
of T. A. Hester, Deceased  
APPROVED:

Martha Hester  
Date July 8, 1967

RYDER SCOTT MANAGEMENT COMPANY

922 EIGHTH STREET

PHONE (817) 723-3313

WICHITA FALLS, TEXAS 76301

July 6, 1967

Re: Nichols-Artesia  
Waterflood Project  
Eddy County, N. M.

Gentlemen:

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Yours very truly,

RYDER SCOTT  
MANAGEMENT COMPANY

*John N. Moffet*  
John N. Moffet

APPROVED:

*Thomas J. Huber*

Date 7/10/67



# HUMBLE OIL & REFINING COMPANY

MIDLAND, TEXAS 79701

PRODUCTION DEPARTMENT

POST OFFICE BOX 1600

SOUTHWESTERN DIVISION

C. A. LANGNER  
OPERATIONS MANAGER

August 23, 1967

Nichols - Artesia  
Waterflood Project  
Eddy County, New Mexico

Ryder Scott Management Company  
922 Eighth Street  
Wichita Falls, Texas 76301

Attention: Mr. John N. Moffet

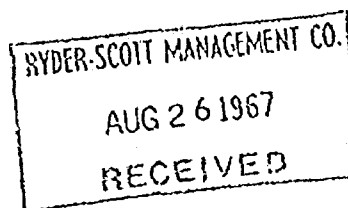
Gentlemen:

It is understood that Ryder Scott Management Company plans to request the New Mexico Oil & Gas Conservation Commission for a Buffer Zone allocation for wells located in Section 20, T18S, R28E, Eddy County, New Mexico, in the Nichols-Artesia Waterflood Project, in order to obtain similar unlimited allowable treatment as enjoyed by the nearby offset leases to the southeast. Humble Oil & Refining Company, as an Overriding Royalty owner in the area, has no objection to this request provided current wells located on the leases that Humble has an interest in be retained as producers, be produced at capacity, and not be converted to injectors. These wells are known as Humble State #1 and Humble State "A" #2 located in the northeast part of Section 20. From telephone conversation with Mr. Don May of your organization, we understand that the continuation of these two wells as producers will not interfere with your plans for waterflood operations.

Yours very truly,

*C. A. Langner*  
C. A. LANGNER

HNR:lw



RYDER SCOTT MANAGEMENT COMPANY

922 EIGHTH STREET

PHONE (817) 723-5313

WICHITA FALLS, TEXAS 76301

July 6, 1967

Re: Nichols-Artesia  
Waterflood Project  
Eddy County, N. M.

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Yours very truly,

RYDER SCOTT  
MANAGEMENT COMPANY

*John N. Moffet*  
John N. Moffet

APPROVED:

*Lamar Lunt*  
Date *July 12, 1967*

RYDER SCOTT MANAGEMENT COMPANY

922 EIGHTH STREET

PHONE (817) 723-5313

WICHITA FALLS, TEXAS 76301

July 6, 1967

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Waterflood Project  
Eddy County, N. M.

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Yours very truly,

RYDER SCOTT  
MANAGEMENT COMPANY

*John N. Moffet*  
John N. Moffet

APPROVED:

*W. E. Lee*  
Date *7-7-67*

RYDER SCOTT MANAGEMENT COMPANY

922 EIGHTH STREET

PHONE (817) 723-5313

WICHITA FALLS, TEXAS 76301

July 6, 1967

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Waterflood Project  
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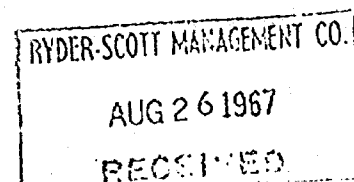
RYDER SCOTT  
MANAGEMENT COMPANY

*John N. Moffet*  
John N. Moffet

APPROVED:

*E. W. Hutchinson*

Date Aug 24, 1967



RYDER SCOTT MANAGEMENT COMPANY

922 EIGHTH STREET

PHONE (817) 723-5313

WICHITA FALLS, TEXAS 76301

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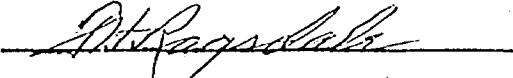
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Yours very truly,

RYDER SCOTT  
MANAGEMENT COMPANY

  
John N. Moffet

APPROVED:



Date July 7-1967

RYDER SCOTT MANAGEMENT COMPANY

922 EIGHTH STREET

PHONE (817) 723-5313

WICHITA FALLS, TEXAS 76301

July 6, 1967

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RYDER SCOTT  
MANAGEMENT COMPANY

*John N. Moffet*  
John N. Moffet

APPROVED:

*M. G. Waters*

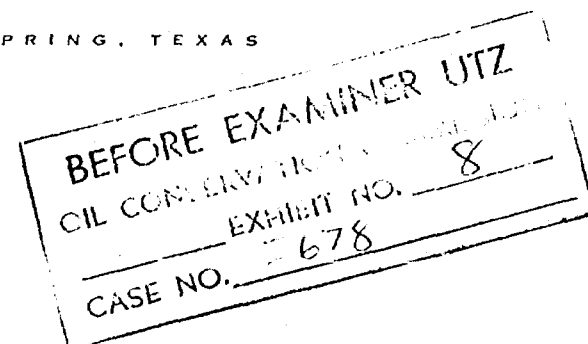
Date *August 19, 1967*



**AMERICAN PETROFINA COMPANY OF TEXAS**

POST OFFICE BOX 13111 • BIG SPRING, TEXAS

September 18, 1967



Ryder Scott Management Company  
922 Eighth Street  
Wichita Falls, Texas

Attention: Mr. Donald T. May

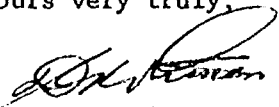
Gentlemen:

This is in answer to your letter of August 7, 1967 concerning Case 3622 before the State of New Mexico Oil Conservation Commission on September 27, 1967.

You have proposed to drill a jointly owned injection well at a location approximately 2640' FNL & 1320' FEL of Section 20, T-18-S, R-28-E in the Artesia Field, Eddy County, New Mexico. American Petrofina would have a one-fourth Working Interest and would pay one-fourth of the cost to drill and operate this well.

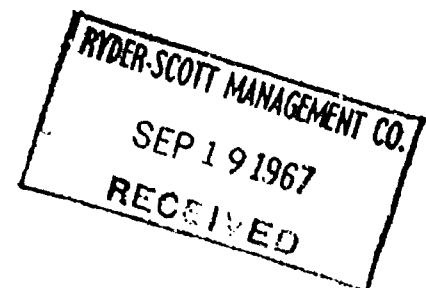
American Petrofina has other Working Interest Owners in our Resler Yates State Lease, the corner of which Lease the above proposed injection well will be drilled. Also, the income from this Lease is committed to a production payment. American Petrofina cannot speak for its partners or the holders of the production payment, but we will be willing to recommend to management that American Petrofina and its partners join in the drilling and operation of this well.

Yours very truly,

  
D. G. Whitten  
District Manager of Production

JMD/ga

cc: L. M. Thompson



TEXAS PACIFIC OIL COMPANY

P. O. Box 4067  
Midland, Texas  
October 13, 1967

Ryder Scott Management Company  
922 Eighth Street  
Wichita Falls, Texas 76301

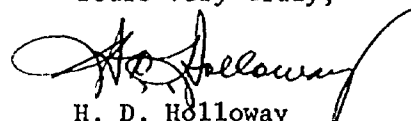
Attention: Mr. Donald T. May

Re: Nichols Artesia Waterflood  
Artesia Pool  
Secs. 20 & 21, T18S, R28E  
Eddy County, New Mexico

Gentlemen:

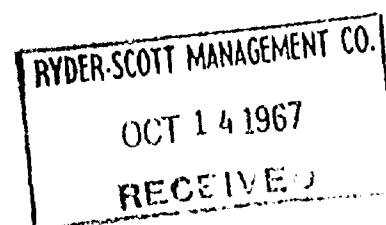
Reference is made to your letter dated October 11, 1967, concerning the above subject. Attached is a copy of the telegram that was sent to the New Mexico Oil Conservation Commission from this office on September 26, 1967.

Yours very truly,

  
H. D. Holloway  
District Engineer

HDH:mc

Attachment





September 26, 1967

TO: New Mexico Oil Conservation Commission  
State Land Office Building  
Santa Fe, New Mexico  
Attention: Mr. A. L. Porter, Jr.

RE: Case No. 3622

Texas Pacific supports Ryder Scott Management Company in their Case No. 3622 to be heard September 27, 1967, with the understanding that approval will in no way constitute infringement upon correlative rights.

Texas Pacific is currently considering joining Ryder Scott in a cooperative lease line injection well to be located somewhere in the vicinity of the NE corner of the State "AL" Lease encompassing the SW/4 of Section 20, T-18-S, R-28-E, Eddy County, New Mexico.

H. D. Holloway  
District Engineer